UNITED STATES DEPARTMENT OF THE INTERIOR
BLM, LOWER SNAKE RIVER DISTRICT

EA Title Page, FONSI, and Decision Record

Applicant (if any) **None (BLM Action)**		Proposed Action: **Grazing Permit Renewal for Pole Creek Allotment**			EA No. **ID-096-02011**
State **Idaho**	County **Owyhee**	District **Lower Snake River**	Field Office **Owyhee**	Authority **NEPA, FLPMA & Taylor Grazing Act**	
Prepared By **ID Team**		Title **Various**			Report Date **August 2003**

LANDS INVOLVED

Meridian	Township	Range	Section(s)	Acres
Boise	**10 and 11 South**	**5 and 6 West**	**Various - See Maps**	**23,396**

Environmental Assessment

#ID-096-02011

U.S. Department of the Interior
Bureau of Land Management
Lower Snake River District
Owyhee Field Office

August 2003

UNITED STATES DEPARTMENT OF THE INTERIOR
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Environmental Assessment No. ID-096-02011 Face Sheet

Consideration of Critical Elements

	N/A or Not Present	Applicable or Present, No Impact	Discussed in EA
Air Quality Concerns		X	
Areas of Critical Environmental Concern	X		
Cultural Resources			X
Environmental Justice (E.O. 12898)	X		
Floodplains	X		
Hazardous Substances or Solid Wastes	X		
Native American Religious Concerns	X		
Noxious Weeds, Invasive Species			X
Prime or Unique Farm Land	X		
Special Status Species			X
Water Quality Concerns			X
Wetlands/Riparian Zones			X
Wild and Scenic Rivers (Eligible)	X		
Wilderness Study Areas			X
Wild Horse Herd Management Areas	X		

BLM Staff Input/Review

Name	Resource Expertise
Bruce Zoellick	Riparian Areas/Water Quality
Valerie Geertson	Botany/Special Status Plants
Mike Mathis	Wildlife/Special Status Animals
Bill Reimers	Range Management/Upland Vegetation
Paul Seronko	Soils
Judi Zuckert	Recreation/Visual Resources/WSA
Lois Palmgren	Cultural Resources
Jim Sparks	Social/Economic

Environmental Assessment # ID-096-02011

Grazing Permit Renewal
for the Pole Creek Allotment

I. INTRODUCTION

A. Purpose and Need for the Proposed Action

The purpose of the proposed action is to authorize livestock grazing and related management facilities on public lands in accordance with applicable laws and regulations. The proposed action is needed to correct unacceptable resource conditions in the Pole Creek (#0635) allotment. The purpose of this environmental assessment (EA) is to analyze the impacts of the proposed livestock grazing management practices and projects. Also, this EA will help the BLM authorized officer formulate informed grazing management decisions that are in conformance with the land use plan objectives, in compliance with Idaho Standards for Rangeland Health, and consistent with the Guidelines for Livestock Grazing Management.

B. Conformance with the Land Use Plan

The Owyhee Resource Management Plan (ORMP) was approved on December 30, 1999. It is the land use plan that guides public land management, including the grazing management program, in the area where the two subject allotments are located. The proposed action is in conformance with the ORMP, as required by 43 CFR 1610.5-3(a). Specifically, the proposed action is designed to achieve Objective LVST 1 (identified on page 23 of the ORMP), which is to provide for a sustained level of livestock use compatible with meeting other resource objectives. Also, the proposed action is in conformance with other ORMP objectives for soils, water, vegetation, riparian/wetland, fisheries, special status species, recreation, visual resources, cultural resources, and wilderness study areas (WSA).

This EA is tiered to the 1999 RMP/Environmental Impact Statement (EIS). Copies of the RMP/EIS are available at BLM's Lower Snake River District Office, and the document is also available for viewing and downloading on BLM's Idaho State Office internet web site http://www.id.blm.gov/. The RMP/EIS broadly analyzes environmental issues relating to public land uses and resource allocations. Consistent with the provisions of 40 CFR 1502.20, the environmental analysis included in the RMP/EIS is incorporated here by reference, and this EA focuses on the environmental issues specific to renewing livestock grazing permits on the Pole Creek Allotment.

C. Relationship to Statutes, Regulations, and Other Requirements

1. Standards and Guidelines

On August 12, 1997, "Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management," were approved by the Secretary of the Interior. Subsequently, livestock management practices must be in conformance with the approved standards and guidelines.

2. Federal Order

On March 31, 1999, B. Lynn Winmill, Chief Judge, U.S. District Court, signed a Memorandum Decision and Order (Civil Case No. 97-0519-S-BLW) finding that BLM violated NEPA by renewing 68 grazing permits in 1997. That decision did not impose a remedy to cure the NEPA violation. However, on February 29, 2000, B. Lynn Winmill signed a Memorandum Decision and Order (Civil Case No. 97-0519-S-BLW) ordering the BLM to complete the review of 68 permits under the new Owyhee Resource Management Plan and Environmental Impact Statement (RMP/EIS) and the BLM's Standards and Guidelines for the highest priority allotments by the end of 2003, and the remaining allotments by the end of 2006. The Pole Creek Allotment is a "highest priority allotment."

As directed by Judge Winmill on July 6, 2001, the BLM has completed Standards and Guidelines Assessments and Determinations for the Pole Creek Allotment. The BLM's Authorized Officer has determined that existing grazing management practices and /or levels of grazing use on public lands are significant factors resulting in failure to achieve the standards for rangeland health and conform with the guidelines for grazing administration.

3. North and Middle Fork TMDL

The proposed action is needed to the improve water quality of streams identified as water quality limited in the 1999 "North and Middle Fork Owyhee Subbasin Assessment and Total Maximum Daily Load" document prepared by the State of Idaho's Department of Environmental Quality (DEQ). A Water Quality Restoration Plan (WQRP) for that portion of the North and Middle Fork Owyhee Subbasin within Pole Creek Allotment has been prepared and is incorporated into the proposed action (See Appendix 1). According to the above document, an implementation plan will be developed within 18 months of Environmental Protection Agency (EPA) TMDL approval. The TMDL was approved in February 2000.

In 1998 two water bodies in the Pole Creek Allotment were classified by the EPA under 303(d) of the Clean Water Act as water quality limited for the following reasons:

Middle Fork Owyhee River - Excessive sediment, high temperature, flow alteration
Squaw Creek - Excessive sediment, high temperature, flow alteration

Monitoring by DEQ in 1999 showed that existing uses of the Middle Fork Owyhee River and the North Fork Owyhee River and their tributaries include: cold water biota, salmonid spawning and rearing (of redband trout), primary contact recreation, secondary contact recreation, and agricultural water supply. Additional uses designated for the Middle Fork Owyhee River include domestic water supply and special resource waters.

All water bodies are required to meet Idaho water quality standards for designated beneficial uses within the State of Idaho. Also, Section 401 of the Clean Water Act states that in the case of interstate waters where state criteria differ, the standards of the down stream state must be met at the border.

The State of Oregon water quality standards classify the Middle Fork Owyhee River to be protected for public domestic water supply, private domestic water supply, livestock watering, salmonid fish rearing, salmonid fish spawning, resident fish and aquatic life, wildlife hunting, fishing, boating, water contact recreation, and aesthetic quality.

The State of Oregon included the Middle Fork Owyhee River on their 1998 303(d) list. The section of Squaw Creek down stream from the Idaho/Oregon border has not been listed at this time. The State of Oregon Department of Environmental Quality's water quality and beneficial use support assessment for the Middle Fork Owyhee River indicate that temperature is a pollutant of concern.

Temperature data from streams within the North and Middle Fork Owyhee Hydrologic Unit (HUC) show that streams exceed the current Idaho and Oregon water quality standards for cold water biota, and salmonid rearing and salmonid spawning during the designated spawning period. Therefore the "North and Middle Fork Subbasin Assessment and Total Maximum Daily Load" (TMDL) document was prepared in 1999. Data collected and reviewed during this process did not support the excessive sediment classification, however there can be no increases to the current sediment load that would impair existing uses. The TMDL also did not indicate an excess of bacteria in the system, therefore no bacteria load reduction was proposed. EPA does not require flow alteration to be addressed as a TMDL pollutant, therefore flow alteration is not addressed.

All pollutants listed in the 1998 303(d) list are nonpoint sources originating on public, state or private lands within fourth order hydrologic unit (HUC17050107) which in part includes the North and Middle Fork Owyhee Rivers and their tributaries in southwest Idaho. They drain generally west from Idaho into Oregon from Juniper Mountain of the Owyhee Mountain range. These waters are used primarily for livestock grazing and fish and wildlife habitat.

All the listed pollutants, with the exception of flow modification, are the result of streambank damage and loss of streambank shade due to livestock grazing.

D. Grazing Allotment and Permit Background

The Pole Creek Allotment (0635) is located in southwestern Owyhee County, Idaho, approximately 30 miles south of Jordan Valley, Oregon. The allotment lies in the Owyhee Mountains and includes the western slopes of Juniper Mountain. The Middle Fork of the Owyhee River forms a portion of the southern boundary, the south rim of Squaw Creek forms a portion of the northern boundary, the Idaho-Oregon state line from the western boundary and Squaw Creek also forms a large portion of the eastern boundary. Elevations

on the allotment range from around 4800 feet along the rim of the Squaw Creek along the northern portion of the allotment to over 2200 feet along the eastern portion on Juniper Mountain. The land ownership status for the allotments is as follows:

Allotment	Pasture	Federal	State	Private	Total
Pole Creek	1	20,846	643	41	21,529
Pole Creek	2	1,001	0	400	1,401
Pole Creek	3	1,549	0	0	1,549
Total		23,396	643	441	24,479

The permitted use in Animal Unit/Months (AUMs) for the allotment is as follows:

Allotment	**Permittee**	**Total**	**Suspended Use**	**Active Use**	**Exchange of Use**	**Percent BLM AUMs**
Pole Creek	Mendieta	2599	1131	1468	0	97

II. DESCRIPTION OF THE ALTERNATIVES

A. Alternative 1 - No Grazing (Map 1)

Permitted Use:

The no grazing alternative equates to not permitting grazing on the Pole Creek Allotment. No livestock would be authorized to graze on 23,396 acres of public land on the Pole Creek Allotment.

Grazing Management:

No livestock grazing would be permitted on public land under this alternative.

B. Alternative 2 - Present Situation (Map 2)

Under this alternative, current grazing practices and management would continue and no rangeland management projects would be constructed.

Permitted Use:

Permittee	Allotment	Livestock No. & Kind	Start Date	End Date	% PL	Permitted AUMs
Mendieta	Pole Creek	500 C	7/1	9/30	97	1467
					Total	1467

Grazing Management:

Under this alternative, cattle would be authorized to graze in all pastures beginning 7/1 and ending 9/30 every year. Cattle have normally grazed Pastures 1A and 1B during this timeframe. Until recently cattle have grazed Pasture 3 beginning June 1 and ending June 30 and Pasture 2 in the late summer/fall. An (55 acre) exclosure at Manada Flat is not grazed by livestock.

Pasture	Use Period
1A	7/1 - 9/30
1B	7/1-9/30
2	7/1 - 9/30
3	7/1 - 9/30
Manada Flat	No Grazing

Permit Terms and Conditions:

Permit terms and conditions specific to the Pole Creek Allotment would be as follows:

1. All cattle 6 months of age and older must be eartagged with assigned color and number on the Pole Creek Allotment (#0635).

2. A minimum 4 inch stubble height will be left on herbaceous vegetation within the riparian area along 4.0 miles of the Middle Fork of the Owyhee River in allotment #0635 at the end of the growing season as identified in the fisheries objective of the Owyhee EIS.

3. Turnout is subject to Boise District Range Readiness Criteria.

4. Your certified actual use report is due within 15 days of completing your authorized annual grazing use.

5. Salt and/or supplement shall not be placed within one quarter (1/4) mile of springs, streams, meadows, aspen stands, playas, or water developments.

6. Changes to the scheduled use require prior approval.

7. Trailing activities must be coordinated with the BLM prior to initiation. A trailing permit or similar authorization may be required prior to crossing public lands.

8. Livestock exclosures located within your grazing allotments are closed to all domestic grazing use.

9. Range improvements must be maintained in accordance with the cooperative agreements and range improvement permits in which you are a signator or assignee. All maintenance of range improvements within a WSA requires prior consultation with the authorized officer.

10. All appropriate documentation regarding base property leases, lands offered for exchange-of-use, and livestock control agreements must be notarized prior to submission and be in compliance with Boise District Policy.

11. Failure to pay the grazing bill within 15 days of the due date specified shall result in a late fee assessment of $25.00 or 10 percent of the grazing bill, whichever is greater, not to exceed $250.00. Payment made later than 15 days after the due date shall include the appropriate late fee assessment. Failure to make payment within 30 days may be a violation of 43 CFR 4140.1 (B) (1) and shall result in action by the authorized officer under 43 CFR 4150.1 and 4160.1.

12. Livestock grazing will be in accordance with your allotment grazing schematic(s). Changes in scheduled pasture use dates will require prior authorization.

13. Utilization may not exceed 50 percent of the current year's growth.

As a result of the February 29, 2000, Memorandum Decision and Order by Judge B. Lynn Winmill, the following interim terms and conditions would also apply:

1. Key herbaceous riparian vegetation, where streambank stability is dependent upon it, will have a minimum stubble height of 4 inches on the streambank, along the greenline after the growing season;
2. Key riparian browse vegetation will not be used more than 50 percent of the current annual twig growth that is within reach of the animals;
3. Key herbaceous riparian vegetation on riparian areas, other than the streambanks, will not be grazed more than 50 percent during the growing season, or 60 percent during the dormant season;
4. Streambank damage attributable to grazing livestock will be less than 10 percent on a stream segment.

Rangeland Management Projects:

No rangeland management projects would be needed to implement this alternative.

C. Alternative 3 - Proposed Action (Map 3)

Permitted Use:

Under this alternative active permitted use would remain equal to the current level.

Allotment Name & No.	Livestock No. & Kind	Season of Use Begin	Season of Use End	PL %	AUMS
Pole Creek #0635	500 C	5/16	7/15[1]	97	973
Pole Creek #0635	249[2] C	10/1[2]	11/15	97	366
Pole Creek #0635	66[3] C	10/1	11/30	97	129
				Total	1468

[1] Livestock would begin moving from Pole Creek Allotment beginning 7/1 to Oregon State Land and would be entirely off the Pole Creek Allotment by 7/15.

[2] Grazing during this period would be contingent upon two factors: (1) precipitation that would proceed turnout sufficient to provide water for livestock use in ephemeral drainages and provide green up of upland forage vegetation, and (2) an upward trend in riparian habitat conditions. Cattle numbers may vary but use will not exceed 366 AUMs on public lands.

[3] Cattle numbers may vary but use will not exceed 129 AUMs on public lands in Pasture 2.

Grazing Management :

Cattle will graze this allotment under a 4-year cycle. Pastures 1A, 1B and 3 will be defer rotated. Spring grazing (May 16-July 15) will be rotated with fall grazing (October 1 - November 15). The grazing schedule will be stuttered so that spring grazing will occur 2 years in a row followed by fall grazing 2 years in a row. When Pasture 1A is grazed in the spring then Pasture 1B and 3 will be grazed in the fall. Also, when Pasture 1B and 3 are grazed in the spring then Pasture 1A will be grazed in the fall. The fall grazing in Pastures 1A, 1B and 3 is contingent upon two factors: (1) precipitation that would proceed turnout sufficient to provide water for livestock use in ephemeral drainages and provide green up of upland forage vegetation, and (2) an upward trend in riparian habitat conditions.

Pasture 2 will be grazed every year beginning October 1 and ending November 30. Trailing will be authorized within this pasture including authorization to stay overnight or a few days to facilitate livestock movement with prior approval from the BLM. Manada Flat, an existing 55-acre exclosure, will not be grazed. Please refer to the chart below for a graphic display of the four-year grazing sequence.

Pasture Name	Authorized Use Period			
	Year I	Year II	Year III	Year IV
1A	5/16-7/15	5/16-7/15	10/1-11/15	10/1-11/15
1B	10/1-11/15	10/1-11/15	5/16-7/15	5/16-7/15
3	10/1-11/15	10/1-11/15	5/16-7/15	5/16-7/15
2	10/1-11/30	10/1-11/30	10/1-11/30	10/1-11/30
Manada Flat	no grazing	no grazing	no grazing	no grazing

Permit Terms and Conditions:

Permit terms and conditions specific to the Pole Creek Allotment would be as follows:

1. You are required to properly complete, sign and date an Actual Grazing Use Report Form (BLM Form 4130-5) for each allotment. The completed form(s) must be submitted to this office within 15 days from the last day of your authorized annual grazing use.

2. Supplemental feeding is limited to salt, mineral, and/or protein in block, granular, or liquid form. If used, these supplements must be placed at least one-quarter (1/4) mile away from any riparian area, spring, stream, meadow, aspen stand, playa, special status plant population, or water development.

3. Pursuant to 43 CFR 10.4(b), you must notify the BLM Field Manager, by telephone with written confirmation, immediately upon the discovery of human remains, funerary objects, sacred objects, or objects of cultural patrimony (as defined in 43 CFR 10.2) on federal lands. Pursuant to 43 CFR 10.4(c), you must immediately stop any ongoing activities connected with such discovery and make a reasonable effort to protect the discovered remains or objects.

4. You are not authorized to graze livestock in the Horsehead Spring, Big Willow Spring, Post Camp Spring, Little Willow Spring, Scott Spring, Manada Flat, Manada Wildlife, and Two Spring exclosures in the Pole Creek Allotment.

5. Beginning 2004, all cattle 6 months of age and older must be eartagged with an assigned color and number on the Pole Creek Allotment (#0635).

6. All maintenance of range developments within a WSA requires prior approval from the authorized officer.

Short Term Objectives:

Listed below are short-term objectives, in the form of grazing use guidelines that will be implemented.

- At the key areas in Pastures 1A, 1B, 2 and 3 shown on the attached Monitoring Location Map, utilization of bluebunch wheatgrass, needlegrass, bottlebrush squirreltail, Idaho Fescue or mountain brome will not exceed 50 percent of the current year's growth as determined by the Qualitative Assessment Landscape Appearance Method or the Key Species Method.

- A minimum of 4 inches of median stubble height will remain on key hydric herbaceous species such as Nebraska sedge and beaked sedge at the end of the grazing period in the riparian area along Middle Fork Owyhee River, Duke's Hole Creek, Peach Creek, Helen Creek, Squaw Creek, Pole Creek, Scott Spring Creek, Little Willow Creek, CCC Spring Creek, Two Spring Creek and Berry Gulch Creek as measured at key areas shown on the attached Monitoring Location Map.

- In any given year, in the riparian areas along those stream listed above, browsing on woody species, including but not limited to willow, should be limited to an incidence of use not to exceed 25 percent on young woody plants less than 3 feet in height as measured at key areas shown on the attached Monitoring Location Map 5.

- Streambank alteration attributable to livestock grazing (pugging, shearing, trails, trampling) will be less than 10 percent as measured at the key areas shown on the attached Monitoring Location Map.

Rangeland Management Projects:

The following rangeland developments would be constructed under this alternative. These projects would require some off road travel for survey, design and construction. Motorized travel within WSAs would be restricted to existing roads. New fences would be constructed to conform with BLM standard fence designs. See Map 3 for the approximate location of the rangeland projects.

a. Pole Creek/Stateline Fence: This fence would be a cooperative effort between the BLM, Oregon Department of State Lands (ODSL), and the permittee. Mr. Mendieta would construct approximately one mile of fence on the stateline adjacent to his private property in Pasture 3. BLM and ODSL would supply the materials and construct a fence on the stateline within the Pole Creek Breaks along sections 3 and 10, a distance of approximately .75 mile. Other areas may need "gap" fencing between rim rocks to prevent livestock movement but the permittee would be responsible for locating and reporting to the BLM possible fence construction needs.

b. Fence Removal: The juniper chaining fence near Manada Flat (approximately 1.0 mile) is dysfunctional and no longer needed and would be removed by the BLM.

c. Spring Developments: Two springs located in the northern portion of Pasture 1A would be developed by the BLM and maintained by the permittee. A small exclosure fence would be built to protect the collection and headbox area. The exclosures would be maintained by the permittee. The exclosures would be maintained by the permittee. The maintenance of the other seven authorized existing spring developments in the Pole Creek Allotment would remain the responsibility of the permittee. Coordination with the BLM and possibly tours to the site would precede the BLM's authorization of maintenance or reconstruction of the existing spring developments.

Flexibility:

The permittee has the flexibility to graze pastures 1A, 1B and 3 in the fall in lieu of spring grazing. When he elects to do this, cattle number may increase above the 500 specified but grazing use may not exceed the carrying capacity (1339 AUMs).

D. Alternative 4 - Stuttered early use and rest (Map 3)

Permitted Use:

Under this alternative active permitted use would be reduced approximately 25 percent.

Permittee	Allotment	Livestock No. & Kind	Start Date	End Date	% PL	AUMs
Mendieta	Pole Creek	500 C	5/16	7/15	97	973
Mendieta	Pole Creek	63* C	10/1	11/30	97	122
					Total	1095

*Cattle numbers could vary but use would not exceed 122 AUMs on public lands and utilization would not exceed 50 percent on key forage species. This line pertains to Pasture 2 only.

Grazing Management:

Under this alternative, cattle would graze within Pastures 1A and 1B beginning May 16 and ending July 15 under a four year rotation. Two years in a row cattle would graze one of the two pastures followed by two additional years in which grazing would not occur. When the cattle graze within Pasture 1A, 1B would not be grazed and vice versa. Pasture 3 would be combined with Pasture 1B. Pasture 2 would be grazed every year beginning October 1 and

ending November 30. Manada Flat, an existing 55 acre exclosure, would not be grazed. Please refer to the chart below for a graphic display of the four year grazing sequence.

Pasture Name	Authorized Use Period			
	Year I	Year II	Year III	Year IV
1A	Rest	Rest	5/16-7/15	5/16-7/15
1B	5/16-7/15	5/16-7/15	Rest	Rest
3	5/16-7/15	5/16-7/15	Rest	Rest
2	10/1-11/30	10/1-11/30	10/1-11/30	10/1-11/30
Manada Flat	no grazing	no grazing	no grazing	no grazing

Permit Terms and Conditions:

Permit terms and conditions specific to the Pole Creek Allotment would be as follows:

1. You are required to properly complete, sign and date an Actual Grazing Use Report Form (BLM Form 4130-5) for each allotment. The completed form(s) must be submitted to this office within 15 days from the last day of your authorized annual grazing use.

2. Supplemental feeding is limited to salt, mineral, and/or protein in block, granular, or liquid form. If used, these supplements must be placed at least one-quarter (1/4) mile away from any riparian area, spring, stream, meadow, aspen stand, playa, special status plant population, or water development.

3. Pursuant to 43 CFR 10.4(b), you must notify the BLM Field Manager, by telephone with written confirmation, immediately upon the discovery of human remains, funerary objects, sacred objects, or objects of cultural patrimony (as defined in 43 CFR 10.2) on federal lands. Pursuant to 43 CFR 10.4(c), you must immediately stop any ongoing activities connected with such discovery and make a reasonable effort to protect the discovered remains or objects.

4. You are not authorized to graze livestock in the Horsehead Spring, Big Willow Spring, Post Camp Spring, Little Willow Spring, Scott Spring, Manada Flat, CCC and Two Spring exclosures in the Pole Creek Allotment.

5. All cattle 6 months of age and older must be eartagged with an assigned color and number on the Pole Creek Allotment (#0635).

6. All maintenance of range developments within a WSA requires prior approval from the

authorized officer.

Short Term Objectives:

Listed below are short term objectives, in the form of grazing use guidelines that would be implemented under this alternative. Adherence to these guidelines and the prescribed grazing management program would be likely to maintain or make progress toward meeting rangeland health standards and land use plan objectives. Periodic evaluation and interpretation of these guidelines could provide an indication of the potential success of the grazing management program.

- At the key areas in Pastures 1A, 1B, 2 and 3 shown on the attached Monitoring Location Map, utilization of bluebunch wheatgrass, needlegrass, bottlebrush squirreltail, Idaho Fescue or mountain brome will not exceed 50 percent of the current year's growth as determined by the Qualitative Assessment Landscape Appearance Method or the Key Species Method.

- A minimum of 4 inches of median stubble height will remain on key hydric herbaceous species such as Nebraska sedge and beaked sedge at the end of the grazing period in the riparian area along Middle Fork Owyhee River, Duke's Hole Creek, Peach Creek, Helen Creek, Squaw Creek, Pole Creek, Scott Spring Creek, Little Willow Creek, CCC Spring Creek, Two Spring Creek and Berry Gulch Creek as measured at key areas shown on the attached Monitoring Location Map.

- In any given year, in the riparian areas along those stream listed above, browsing on woody species, including but not limited to willow, will be limited to an incidence of use not to exceed 25 percent on young woody plants less than 3 feet in height as measured at key areas shown on the attached Monitoring Location Map.

- Streambank alteration attributable to livestock grazing (pugging, shearing, trails, trampling) will be less than 10 percent as measured at the key areas shown on the attached Monitoring Location Map.

Rangeland Management Projects:

The following rangeland developments would be constructed under this alternative. See Map 4 for the approximate locations of these projects. These projects would require some off road travel for survey, design and construction. No motorized travel would occur within WSAs. New fences would be constructed to conform to BLM standard fence designs. See Map 3 for the approximate location of the rangeland projects.

1. Pole Creek/Stateline Fence: This fence would be a cooperative effort between the ODSL, the BLM and the permittee. Those areas on the state line between Oregon and Idaho that are not now fenced would be fenced. The fence would be approximately 3 miles long. BLM and Oregon Division of State Lands would supply materials and the permittee would construct and maintain this fence.

2. Fence Removal: The old juniper chaining protective fence near Manada Flat (approximately 1.0 mile) and the Middle Fork Gap Fence between Pastures 1B and 3 (approximately .25 mile) would be removed by the BLM. The juniper chaining fence is not functional and is no longer needed. The gap fence is also no longer needed under this alternative.

3. Spring Developments: Two springs located in the northern portion of Pasture 1A would be developed by the BLM and maintained by the permittee. A small exclosure fence would be built to protect the collection and headbox area. The exclosures would be maintained by the permittee.

E. Alternative 5 - Maximize Projects

Permitted Use:

Under this alternative active permitted use would remain equal to the current level.

Permittee	Allotment	Livestock No. & Kind	Start Date	End Date	% PL	AUMs
Mendieta	Pole Creek	500 C	7/1	9/30	97	1467

Grazing Management:

Under this alternative cattle would graze in all pastures beginning 7/1 and ending 9/30. Water development projects would be constructed to improve distribution of the cattle.

Pasture Name	Authorized Use Period
1A	7/1-9/30
1B	7/1-9/30
2	7/1-9/30
3	7/1-9/30

Permit Terms and Conditions:

There would be no other terms and conditions to the permit.

Rangeland Management Projects:

The following rangeland developments would be constructed under this alternative. See Map 4 for the approximate locations of these projects. These projects would require some off road travel for survey, design and construction. No motorized travel would occur within WSAs. All new spring developments in WSAs would be constructed by hand and not with motorized backhoes. New fences would be constructed to conform with BLM standard fence designs.

1. Spring Developments: Twelve new spring developments would be constructed. All but three of these would be in WSAs. Small exclosures would be built to protect the collection and overflow areas. BLM would supply the materials and construct the projects. The permittee would maintain the projects.

2. Reservoirs: Three new reservoirs would be built. All three lie within a WSA. Construction of the reservoirs would require motorized cross country travel. Construction would also require caterpillar type equipment. BLM would build the projects and the permittee would maintain them.

3. Spring Project Maintenance: Three existing springs would be maintained. Two of these lie within a WSA. All have access roads to the springs. The permittee would maintain these projects with BLM supervision and approval.

4. Pole Creek/Stateline Fence: This fence would be constructed as described under Alternative 3.

F. Other Alternatives Considered

An alternative that authorizes livestock grazing on the Pole Creek Allotment beginning October 1 and ending November 30 was considered. This alternative would result in a 33 percent reduction in active permitted use. It would not require changes in cattle numbers. This alternative would make significant progress toward meeting LUP objectives. However, it has the potential to severely impact the economic and social operation of the ranch. The permittee has stated that this change to the current season of use would not meet the needs of his operation. Based upon comments from the livestock permittee, this alternative could be more disruptive to the ranch than other alternatives and therefore was not fully analyzed.

III. AFFECTED ENVIRONMENT

A. Upland Vegetation

Approximately 45 percent of the uplands in this allotment are shallow or very shallow range sites dominated by low sagebrush. The shallow range sites are potentially dominated by low sagebrush with Idaho fescue and bluebunch wheatgrass in the understory and the very shallow range sites are potentially dominated by low sagebrush with lesser amounts of Idaho fescue and bluebunch wheatgrass and a larger component of Sandberg's bluegrass. Approximately 30 percent of the uplands in this allotment are loamy range sites, potentially dominated by mountain big sagebrush with Idaho fescue and bluebunch wheatgrass in the understory. These sites occur throughout the allotment on the small and large sideslopes which have deeper soils but are concentrated in the eastern portion of the allotment on the higher foothills of Juniper Mountain. The slopes of the drainages contain western juniper and extensive areas of rocky outcrops. Western juniper is also predominant over many of the other range sites throughout much of the allotment, and sites with scattered old juniper trees which are indicative of shallow breaks and juniper savanna range sites, also occur. Mountain mahogany sites also occur on the slopes of Juniper Mountain.

The plant community integrity and native species diversity are satisfactory in the shallow and very shallow range sites. These communities retain a good composition of decreaser grass species and shrub component. The deeper loamy communities have been encroached upon by western juniper and exhibit a lack of shrub component. Sagebrush is minimal in the understory and bitterbrush and mountain mahogany are scattered. The loamy community also lacks interspatial decreaser grasses and decreaser grasses in general are present but in fewer than expected numbers. Increaser grasses predominate with needlegrass being the most common interspatial grass.

B. Special Status Plants

Inventories for special status plants have not been conducted in the Pole Creek Allotment. Incidental work for site-specific projects has yielded one occurrence, but this type of work has been limited. There is limited information, particularly recent information, about the presence or absence of special status plants in this allotment, or impacts that may be occurring to these plants. All observations regarding the status of special status plants reported in this document are on file with the CDC (Idaho Fish & Game Conservation Data Center) and were made by BLM staff.

Calico-flower (*Downingia bacigalupii*), a BLM sensitive species, was reported in Pasture 2 in the early 1980's. This annual species is found in drying mud of vernal pools, lakes, wet meadows, and streambanks. It has also been found in man-made structures such as roadsides and irrigation ditches. This plant typically starts growing in late May and most individuals in a population would disperse seed and be dormant by the end of August. The status of the population in this allotment was not recorded and the site has not been revisited. It is

unknown if the population is extant or if livestock are presently having any impacts on the plants or habitat. Cattle are typically drawn to this habitat type since it is a water source. Livestock impacts to this species have been documented elsewhere as a result of trampling when the soil was wet, but this species can apparently persist in areas subjected to trampling, at least in the short term.

Federally listed threatened or endangered plant species are not known to occur on the Pole Creek Allotment, although the U.S. Fish and Wildlife Service considers all of Idaho to be within the potential range of Ute ladies'-tresses (*Spiranthes diluvialis*), a federally threatened orchid species. This wetland plant occurs in springs, seeps, and stream habitats. These habitats are generally disproportionately impacted by livestock grazing, primarily through trampling and herbivory. There is insufficient information to determine the presence or absence of Ute ladies'-tresses populations in this allotment, though riparian inventories and monitoring have yielded no occurrences. The nearest known Ute ladies'-tresses population is more than 200 miles from the allotment (USFWS 1998).

C. Wildlife/Special Status Species

The Pole Creek Allotment contains spring/summer/fall habitat for mule deer, elk and pronghorn antelope, some winter deer and elk habitat and yearlong or seasonal habitat for a large diversity of raptors, other nongame birds, mammals, reptiles and amphibians.

A number of special status animal species classified as either BLM "Sensitive Species" or State of Idaho "Species of Special Concern", are known or likely to occur within the allotment. These include prairie falcon, northern harrier, ferruginous hawk, sage grouse, calliope hummingbird, rufous hummingbird, dusky flycatcher, gray flycatcher, willow flycatcher, loggerhead shrike, Swainson's thrush, black-throated gray warbler, yellow warbler, MacGillivray's warbler, Wilson's warbler, yellow-headed blackbird, green-tailed towhee, grasshopper sparrow, sage sparrow, Brewer's sparrow, several bat species, pygmy rabbit, western toad and redband trout. One federal candidate species for possible listing as threatened or endangered, the yellow-billed cuckoo, may also occur within the allotment, although it has not yet been documented.

Approximately 36 percent, or 11of the 31 miles, of stream riparian habitat within this allotment have been determined to be in proper functioning condition and, along with those spring, seeps and wet meadows excluded from livestock grazing, are likely to be providing at least marginally suitable habitat for most dependant special status species including redband trout, neotropical migratory birds, amphibians and others. However, with 64 percent or 20 miles of stream riparian habitats that rated as functional-at risk or nonfunctioning, as well as most unfenced springs, seeps and wet meadows, annual hot season grazing has resulted in a lack of suitable cover, structure, forage and/or water quality. Within the uplands, while most low sagebrush communities are characterized by a good abundance, composition and vigor of desirable grasses, forbs are generally sparse and shrubs declining in many areas. This is resulting in a loss of forage and cover for many shrub steppe species. In loamy sites, as well as some shallow (low sagebrush) sites the encroachment of western juniper, while providing valuable seasonal or yearlong habitat for deer, elk, some neotropical migratory birds, bats

and others, has also contributed to a declining shrub component and reduced frequency of desirable bunchgrasses resulting in habitat that is largely unsuitable for some sagebrush steppe obligates such as sage grouse and much less suitable for others such as pygmy rabbit, sage sparrow, Brewer's sparrow and others.

D. Riparian/Aquatic Resources

About 37 miles of perennial or intermittent streams are in the Pole Creek Allotment. Major drainages include the Middle Fork Owyhee River, its tributaries (Scott Springs, Two Springs, Little Willow Spring Creeks), Pole Creek, and Squaw Creek and its tributaries including Scott, Lunch, Peach, and Helen Creeks. Pole Creek is a tributary to the Middle Fork Owyhee River and Squaw Creek is a tributary to the North Fork Owyhee River. The majority of the streams on the allotment have perennial surface flows, with approximately 15 miles of stream with intermittent surface flows.

Of the 31 miles of stream inventoried on the Pole Creek Allotment, 36 percent (11 miles) are in proper functioning condition, primarily segments of the Middle Fork Owyhee River, and Pole and Squaw Creeks that were within rocky or steep canyons that restrict livestock access. Riparian areas in proper functioning condition are generally vegetated with diverse shrub communities dominated by alder (*Alnus incana*), willows (*Salix scouleriana, S. lasiandra*, and *S. lutea*), red-twig dogwood (*Cornus sericea*), Wood's rose (*Rosa woodsii*), golden current (*Ribes aureum*) and chokecherry (*Prunus virginiana*).

Approximately 64 percent (20 miles) of streams in the Pole Creek Allotment are in functional-at risk or nonfunctional condition. Riparian shrubs and late-seral herbaceous species (sedges and rushes) are entirely absent, or present in very low numbers, on these stream segments, such that diversity of species and of age classes of riparian vegetation is inadequate to stabilize streambanks and channels. Functional-at risk stream segments are often laterally unstable, with the stream channel wide and shallow relative to that of the landscape setting. In general, streambanks are not strongly enough vegetated to resist the erosive forces of high stream flows on these stream segments, and streambanks are also physically altered by livestock shearing and trampling of streamside vegetation and soils.

Livestock grazing management is an important factor determining riparian condition on stream segments that are functional-at risk in the Pole Creek Allotment, including the Middle Fork Owyhee River and substantial portions of its tributaries. Additionally, substantial amounts of Pole and Squaw creeks and their tributaries are impacted by livestock grazing.

Redband trout (*Oncoryhnchus mykiss gairdneri*), which is a BLM and State of Idaho sensitive specie, inhabits both the Middle Fork Owyhee River and Squaw Creek drainages. They are known to inhabit all or portions of the following streams in the allotments: Middle Fork Owyhee River, Scott Springs, Granite Springs, Pole, Squaw, and Peach creeks. Other native fish species that

inhabit the Middle Fork Owyhee River and Squaw Creek watersheds include: speckled dace (*Rhinichthys osculus*), longnose dace (*R. cataractae*), bridgelip sucker (*Catostomus columbianus*), and redside shiner (*Richardsonius balteatus*).

Redband trout habitat has been negatively impacted in streams in functional-at risk condition in the Pole Creek Allotment due to the loss of living space (channels over-widened and shallow), and the loss of riparian shade needed to maintain cool water temperatures. Unstable streambanks on functional-at risk stream segments also contribute to elevated fine sediment levels, which negatively impact trout spawning and rearing success.

E. Water Quality

All streams within the Pole Creek Allotment have general use designations for secondary contact recreation, agricultural water supply, wildlife habitat, and aesthetics. Additionally, the Middle Fork Owyhee River has been assigned the following additional designated uses by the State of Idaho, DEQ: domestic water supply, cold water biota, salmonid spawning for redband trout, primary contact recreation, and special resource water (IDAPA 16.01.02.140). Also, salmonid spawning and rearing of redband trout is an existing beneficial use in the following streams on the allotment where redband trout have been observed during aquatic surveys conducted by BLM: Scott Springs, Granite Springs, Pole, Squaw, and Peach creeks.

The Middle Fork Owyhee River and Squaw Creek from their headwaters to the Oregon/Idaho state line are listed by the State of Idaho under section 303(d) of the Clean Water Act as water quality limited streams. Water quality data analyzed by the Idaho DEQ indicates sediment, flow alteration, and thermal modification are the primary pollutants in the Middle Fork Owyhee River and Squaw Creek.

Thermal modification of the Middle Fork Owyhee River, Squaw Creek, and their tributaries is due to the loss of shade producing vegetation such as shrubs and herbaceous grass-like species along streambanks. Additionally, streambank alteration caused by livestock (trampling, pugging, shearing, etc.) increases stream width and decreases depth, thereby exposing more water to solar radiation and increasing water temperature. Sediment sources in this portion of the Middle Fork Owyhee River subbasin are in part due to road crossings, however, the major contributor is more likely unstable, eroding streambanks resulting from excessive livestock use.

The North and Middle Fork Owyhee Subbasin Assessment and Total Maximum Daily Load document, issued in December of 1999, concluded that the beneficial uses of salmonid spawning, salmonid rearing, and cold water biota were not fully supported in the Middle Fork Owyhee River and tributaries to the North Fork Owyhee River such as Squaw Creek. Additionally, stream temperature criteria were exceeded for the Middle Fork Owyhee River and tributaries of the North Fork Owyhee River, but sediment standard criteria, and bacteria criteria for full support of recreation beneficial uses were not identified as being exceeded.

The North and Middle Fork Owyhee Subbasin Assessment and Total Maximum Daily Load

indicated that cold water biota and salmonid rearing standard attainment would require a 25-58 percent reduction in thermal energy, and salmonid spawning standard attainment would require an increase in shade. Idaho DEQ is currently preparing a TMDL Implementation Plan in cooperation with the BLM Owyhee Field Office and other agencies.

F. Soils

The soils in these allotments are diverse mainly due to position on the landscape and sources of parent material. The majority of these soils occur on foothills, structural benches, and tablelands. The main body of soils formed in mixed alluvium and residuum from welded rhyolitic tuffs and breccia. These soils are shallow to moderately deep (with deeper inclusions) and well drained. These soils have a xeric soil moisture regime and a mesic or frigid soil temperature regime. The Hat and Cleavage series are more representative of the soils in the upper two-thirds of the allotment. These soils are generally loamy with high amounts of coarse fragments both on the surface and in the profile. The Hat, Cleavage, Wickahoney, and Yatahoney series are more common in the lower third of the allotment. The Wickahoney and Yatahoney soils are generally more clayey.

In many areas of this allotment, pedastalled interspatial bunchgrass and surface flow patterns are the leading indicators of the ongoing erosional process. Where livestock tend to congregate (riparian areas, water developments, salting areas, or at certain gates) mechanical damage to the soil surface by hoof action is present.

The hazard of erosion on these soils from water is slight to moderate with the exception of the soils that occur on slopes greater than 30 percent. Soils that occur on slopes of 30 percent or greater have a moderate to high hazard of erosion from water. The amount of rock fragments on the surface can greatly modify the erosion hazard. The hazard of erosion from wind is low.

Where western juniper have invaded on other ecological sites (i.e., Loamy 13-16", Shallow-Claypan 12-16") they are having a negative influence on hydrological cycles and vegetative community composition and density. Where invasion is heavy the juniper are highly competitive in terms of available moisture, nutrients, and understory photosynthetic needs. The occurrence of juniper invasion in combination with resource consumptive uses could have negative impacts to these systems.

G. Cultural Resources

Cultural resources are recognized as fragile, irreplaceable resources that represent an integral part of our nation's heritage. BLM policy allows cultural resource protection for potential socio-cultural, public, conservation and scientific uses. The potential of a stratified site to reveal information regarding human adaptation to specific environments and ecosystems is

considerable. For example, the analysis of soils, pollen and faunal materials found in a site can tell us what climatic changes have taken place over time, what types of game were available for subsistence, and what plants were used.

BLM records indicate that cultural resources in the Pole Creek Allotment consist of a variety of site types including lithic scatters and a habitation site. The area was used for camping, and subsistence activities such as food gathering and hunting. Ancestors of the Shoshone and Paiute peoples inhabited this area. The area has also been used for grazing livestock and for recreational purposes.

H. Visual Resource Management (VRM)

Public land within the Pole Creek Allotment is a mix of VRM Class II- Interim Management Policy (IMP) (19,209 acres) and Class IV (4,495 acres) lands. Within VRM Class II areas, the objective is to retain the existing character of the landscape, and very limited construction of new rangeland facilities may be permitted outside of WSAs. Within VRM Class II-IMP areas, at the time of this assessment these areas are treated the same as VRM Class II areas. In Class IV landscapes the level of change to the natural character of landscapes can be high. Within the Pole Creek Allotment, the natural character of some landscapes within VRM Class II-IMP areas has been degraded by heavy livestock grazing. As noted in the Pole Creek Assessment, livestock grazing impacts include bare ground, streambank alteration, and inadequate diversity and structure of plant communities.

I. Recreation

The main recreational activities within the allotment are camping, hunting, fishing, sight-seeing, backpacking, horseback riding, and nature study. Concentrations of livestock in some riparian and upland areas have caused deteriorated natural settings, which detract from recreation experiences of visitors. Examples of deteriorated settings include portions of the Middle Fork Owyhee River, Peach Creek, Dukes Hole Creek, Little Willow Creek, Berry Gulch, Two Springs Creek, CCC Spring Creek, and Scott Spring Creek.

Off-highway motor vehicle (OHV) designations in the allotment include 4,077 acres where travel is limited to existing roads and trails, and 19,628 acres limited to designated roads and trails. Cross-country vehicle travel is not allowed. OHV regulations apply to permitted uses as well as to general public use.

J. Wilderness Study Areas

Portions of three WSAs are included within the boundaries of the Pole Creek Allotment. This includes the entire 6,210 acre Big Willow Springs WSA, 4,711 acres of the 10,780 acre Squaw Creek Canyon WSA, and 7,706 acres of the 14,820 acre Middle Fork Owyhee River WSA.

WSAs are managed in such a manner so as to not impair their suitability for preservation as wilderness. Wilderness values to be protected include solitude, naturalness, opportunities for primitive and unconfined recreation. Livestock grazing in WSAs is considered a "grandfathered" use that may continue in the same manner and degree in which it was being conducted on October 21, 1976, if it does not cause unnecessary or undue degradation of the lands and their resources. There are approximately 5-1/2 miles of fences, six spring developments, and one reservoir within the WSA portions of the allotment.

The Pole Creek Assessment describes livestock grazing impacts including trampled streambanks, impaired stream functionality, and reduced vegetation in portions of the allotment within the WSAs. This has a negative effect on the wilderness value of naturalness, and also has a negative effect on recreationists' experiences of wilderness.

K. Economic/Social

The BLM does not have access to financial or business records for the permittees that graze livestock in the Pole Creek Allotment, therefore it is impossible to provide a detailed discussion of ranch operations, including economic and social conditions.

In addition to use in the Pole Creek Allotment, the permittee, Laz Mendieta has interest in the company with the grazing permit in the Bull Basin allotment (50,000 total acres). He also has permits or interest in permits administered by the BLM in Vale, Oregon and large state leases administered by the State of Oregon.

As part of the July 1999 Final EIS for the ORMP, "typical" ranch operations were developed utilizing producer panels in Owyhee County (see pages III-61 to III-68). The permittee in the affected allotment does not appear to fit exactly into the description of any of the models, but the Jordan Valley Model Ranch seems most appropriate, though it was developed for smaller operations, and the seasons of use vary somewhat. This model ranch is a cow/calf operation centered in southwest Idaho. Calves are born in February and March, run with the cows on rangeland through the fall and are marketed in November. This is a family operation that is supplemented by seasonal hired labor during the irrigation season. Cattle are turned out on rangeland in April and graze a mixture of BLM and state rangeland until fall, when they are moved back to private lands. Winter feeding starts in December and runs through calving and turnout back onto public rangelands. About half of the total AUMs for livestock come from federal and state rangeland resources and the other half come from private rangeland, crop aftermath, and various feeding operations.

For the purpose of this document, there are two general ways a ranch may be directly impacted by the decisions and policies of federal and state agencies. First, there may be changes in the total number of AUMs of grazing authorized on public or state lands. A second way is when there is a change in the seasonal availability of forage use authorized on public lands.

For a detailed discussion of the economic and social conditions in Owyhee county and the region influenced by public lands in the area, see the July, 1999 EIS (pages III-60 to III-73).

IV. ENVIRONMENTAL CONSEQUENCES

A. Alternative 1 - No Grazing (Map 1)

1. Upland Vegetation

This alternative would be expected to have positive impacts to the upland vegetation in the Pole Creek Allotment. The absence of any livestock grazing each year would allow the plants to complete their growth cycles without significant grazing impacts. This would result in improved health and vigor of these plants and should allow significant progress to be made toward meeting the Standard for Rangeland Health in this allotment.

2. Special Status Plants

This alterative would eliminate the risk of adverse impacts to any special status plants that occur in this allotment. Impacts such as trampling, trailing, and herbivory would be eliminated particularly around areas of concentration.

3. Wildlife/Special Status Animals

This alternative would have a positive impact on most wildlife and special status animal species. The lack of livestock grazing would result in increased forage and cover and eliminate trampling and other physical disturbance associated with livestock grazing. This would be especially true within and adjacent to riparian areas where livestock use is generally most concentrated.

4. Riparian/Aquatic Resources

About 20 miles of stream in the Pole Creek Allotment are currently in functional-at risk or nonfunctional condition, due to past and current livestock grazing practices. These stream segments would improve to properly functioning condition most rapidly under the no grazing alternative. Over the long term, the streams would develop and maintain riparian plant communities dominated by late-seral riparian species (willows, sedges, and rushes) with greater plant species diversity, cover, and density than under Alternatives 2, 3, and 4. Stream segments that are currently in proper functioning condition due to limited livestock access would develop riparian plant communities with greater diversity and density of plants than under Alternatives 2, 3, and 4. Aquatic habitat for native fish species, such as redband trout, would improve over the long term as stream channels narrow and deepen, and fine sediment levels decrease due to improved streambank and channel stability. Improved channel shape in combination with increased stream shading from riparian vegetation would maintain cooler water temperatures for fish. Redband trout would particularly benefit from cooler water temperatures.

5. Water Quality

Water quality would improve most rapidly under the no grazing alternative. Decreases in fine sediment levels and stream temperatures would take place over the long term as vigorous riparian plant communities are established on streambanks. As riparian plant communities stabilize streambanks and channels, the stream channel would narrow and deepen, decreasing the amount of solar radiation received by the stream. Increased levels of stream shading from riparian shrubs would also decrease solar energy input to the stream and thereby reduce stream temperatures. Over the long term streams on the allotment would fully support beneficial uses and comply with State of Idaho water quality standards. Improvements in water quality of headwater streams in the Middle Fork Owyhee and Squaw Creek watersheds on the Pole Creek Allotment would also contribute to improved water quality on downstream segments of these 303(d) listed streams. By decreasing temperatures and increasing levels of riparian shade this alternative would comply with Idaho DEQ's North Fork and Middle Fork Owyhee River TMDL.

6. Soils

Overall impacts to the soil resource (being closely tied to the vegetative health of the community and soil surface stability) would be positive and watershed health would be improved. This would allow for moving toward significant progress in meeting Standards for Rangeland Health in this allotment.

Under this alternative the phenological needs of the key plant species in all pastures would be better met. By not grazing the existing perennial grass species, these plants would have an opportunity for improvements in vigor and production, and subsequently reproduction and establishment. These increases in perennial grass species and the subsequent increases in canopy cover, surface litter, above ground structural material, and fibrous root matter would aid in protecting the soil from the forces of both wind and water erosion. Site productivity would be increased. Mechanical damage to the soil surface from livestock hoof action would not continue.

Watershed impairing effects due to western juniper invasion would continue. By allowing the key forage species to meet their phenological growth needs these plants can better compete with the juniper for moisture and nutrients thereby offsetting some of the negative impacts associated with juniper invasion. Also, by building up the amount of fine fuels in the understory, the possibility of natural fire playing more of a role in management of this ecological system would be enhanced.

7. Cultural Resources

Any direct impacts of grazing on cultural resources by livestock including trampling or breakage of artifacts would be avoided under this alternative. This alternative would also result in improvement in vegetative cover and density which would provide a stabilizing effect and contribute to preservation of cultural resources.

8. Visual Resource Management

This alternative would have a positive impact on visual resources. Improvements in vegetative condition and diversity, improvements in streambank structure and stability, and the elimination of trampling and other evidence of livestock use would enhance scenic quality. This would result in more primitive and natural landscapes.

9. Recreation

This alternative would have a positive impact on recreation. Improvements in scenic quality, discussed above, would have a positive effect on recreationists' experiences. Improvements in stream function and water quality would eventually lead to improved opportunities for fishing. Improvements in wildlife habitat would lead to increased opportunities for consumptive and non-consumptive wildlife-related recreation. Reduction of livestock-related impacts would make previously undesirable areas more attractive to recreationists for camping.

10. Wilderness

This alternative would have a positive impact on wilderness. Without substantial grazing, the WSAs would return to more primitive and natural conditions.

11. Economic/Social

If no grazing use was permitted in the Pole Creek Allotment, there would likely be a negative economic impact to the ranch community as a whole and the permittee that previously grazed livestock in the allotment. However, because the BLM does not have extensive knowledge of the ranching interests or alternative grazing options of the permittee, or access to the financial and business records of the permittee, it is impossible to quantify the effect. There could be potential for some of the displaced grazing use to be absorbed into the other operations where the permittee has interest. The permittee could also be forced to find alternative rangelands to graze their livestock, feed them hay or sell them.

In general, other social and economic impacts from this alternative would be similar to those described in the July 1999 EIS for the Owyhee RMP (pages IV-244 to IV-245)

B. Alternative 2 - Present Situation (Map 2)

1. Upland Vegetation

Under this allotment, Pastures 1A, 1B, 2, and 3 of the Pole Creek Allotment would continue to be grazed from July through September each year. Cattle grazing in July occurs when the primary forage species are actively growing, especially those growing on the deeper soil sites at higher elevations in Pastures 1A and 1B.

Grazing while forage plants are actively growing would result in reduced vigor and, because grazing would end September 30, regrowth would not likely occur. Overall, the grazing season of use would allow for improvement in vigor and provide an opportunity for improvements in species diversity and plant community integrity on the lower elevation shallow and very shallow range sites. However, the upper elevation range sites, which are not meeting the standard, are likely to continue to not make significant progress toward meeting the standard.

2. Special Status Plant Species

Since there is so little information about special status plants in this allotment, an evaluation of current livestock management can only be discussed in general terms. The current July-September grazing schedule is outside or towards the end of the active growth season for most upland special status plants that could occur here. Overall, most impacts to special status upland plants that may occur in this allotment would be limited to areas of higher concentration, such as trampling around water sources or salting sites, but it is unknown if impacts of this type are occurring anywhere in the allotment. The current status of the population of calico-flower reported from Pasture 2 is unknown. Livestock impacts to this species have been documented elsewhere as a result of trampling when the soil was wet, but this species can apparently persist in areas subjected to trampling, at least in the short term. Livestock use of an area prior to August (when the plants become senescent) would typically have adverse impacts if the site is accessible to cattle since they are typically drawn to this habitat type as a water source. Riparian habitats would remain in poor condition in areas accessible to cattle as indicated in the assessment.

3. Wildlife/Special Status Animals

Under this alternative, the lack of any spring grazing should continue to promote good vigor and maximum production and cover of decreaser grasses, perennial forbs that comprise critical components of nesting and early brood-rearing habitat for sage grouse and a diversity of other species. It would also continue to avoid physical disturbance of wildlife habitats or populations during this critical season and provide for maximum production of seeds and insects. Three months of annual hot season grazing in all three pastures would, however, continue to result in heavy grazing

and trampling of accessible streams, springs and wet meadows and the continuation of generally degraded riparian habitat conditions within these areas for most dependant special status animals and other wildlife.

4. Riparian/Aquatic Resources

With the continuation of current livestock grazing, approximately 20 miles of stream in the Pole Creek Allotment would remain in functional-at risk condition. With annual grazing during the hot season, utilization of riparian vegetation would be too great to allow the development of the dense, vigorous riparian plant communities needed to stabilize streambanks and channels. Additionally, continued hot season grazing by livestock would continue high levels of bank alteration from livestock shearing and trampling of streambank vegetation. Stream segments currently in proper functioning condition due to limited livestock access would remain under this alternative, but diversity and density of late seral-riparian species would be less than that under Alternative 1, and somewhat less than that of the proposed action.

5. Water Quality

Water quality would not improve under Alternative 2. Continued annual hot season grazing on Squaw and Pole Creeks and the Middle Fork Owyhee River and their tributaries would not allow the development of vigorous, late-seral dominated riparian plant communities on those stream segments. Riparian habitats dominated by late-seral species are needed to stabilize streambanks and channels to allow the formation of deep and narrow stream channels, and reduce fine sediment levels in these streams. Additionally, without the development of late-seral plant communities dominated by willows and other riparian shrubs, levels of stream shading would continue to be inadequate to prevent solar heating of streams. Under this alternative, these streams would not fully support the salmonid spawning and rearing, and cold water beneficial uses, and would not comply with Idaho DEQ's North Fork and Middle Fork Owyhee River TMDL.

6. Soils

Overall impacts to the watershed/soil resource (closely tied to the vegetative community and soil surface stability) would continue where they are occurring and watershed health would be impaired in these areas. The allotment would not make significant progress towards meeting the Standards for Rangeland Health where there currently are problems. In portions of this allotment where livestock use is limited, these standards are being better met.

Under the existing management system the on-going erosional processes and watershed concerns would continue where they have been occurring. The phenological needs of the key perennial species in the high elevation areas would not be met. This would not allow for sufficient regrowth and its associated soil protecting vegetative canopy and litter cover. Soil productivity would be reduced under a system that does not allow for proper nutrient cycling. Mechanical impacts to the soil surface from livestock hoof action would continue where livestock tend to congregate. Many of the erosional features that have been documented in these allotments (pedastalling is an example) have developed over many tens of years and under older grazing management systems. The current systems do not appear to be making progress towards healing these processes where they are evident.

Watershed impairing effects due to western juniper invasion combined with the current grazing systems utilization of the key forage species during their critical phenological periods would continue to have long lasting negative impacts on the plant community in general.

7. Cultural Resources

The present situation (Alternative 2) would continue to have the potential to adversely affect cultural resources, especially in riparian zones and spring areas where cattle tend to concentrate and trample the ground, resulting in loss of integrity of cultural resource sites. Additionally, a long grazing season in the uplands has a greater potential for damage to fragile sites.

Direct impacts from grazing include surface disturbance and soil compaction with subsequent damage to, and repositioning of, artifacts through trampling. The degree and rate of site destruction in relation to the duration of trampling or number of livestock involved is unknown. In addition to artifact breakage, this results in alteration of contextual information and the ensuing loss of site integrity and scientific information.

Indirect impacts of grazing include the removal of vegetative cover, which facilitates erosion and subsequent damage to or complete eradication of cultural sites. In the case of a highly stratified site, this could potentially mean the loss of thousands of years accumulation of cultural material.

8. Visual Resource Management

Renewal of the present grazing system would continue the impacts to scenic quality that are currently occurring in areas of heavy livestock utilization.

9. Recreation

In Alternative 2, impacts to recreation that are currently occurring due to livestock grazing and described in the affected environment section would continue to occur. Recreational use levels would likely continue to incrementally increase, which is the trend throughout the area.

10. Wilderness

The wilderness value of naturalness would continue to be negatively affected in areas of the Big Willow Springs WSA, Squaw Creek WSA, and Middle Fork Owyhee River WSA which receive heavy livestock utilization.

11. Economic/Social

There would not be any direct cost to the permittee or the BLM under Alternative 2. However, as resource conditions continued to degrade under current management, the long term productivity of the rangelands could diminish. The permittees would have to weigh changing their grazing use of the public lands in the allotments (reduced numbers, grazing systems, changes in season of use, etc) against the risk of poor animal performance normally associated with livestock grazing on depleted rangelands (low weaning weights, low pregnancy rates, susceptibility to disease and poisonous plants, etc.)

In general, other social and economic impacts from this alternative would be similar to those described in the July 1999 EIS for the Owyhee RMP (pages IV-69 to IV-70).

C. Alternative 3 - Proposed Action (Map 3)

1. Upland Vegetation

Under this alternative approximately 96 percent of the allotment would be grazed early two years in a row followed by fall use for two years in a row. The shallow and very shallow range site communities would be grazed during the critical growing season two years out of four. This would likely maintain the satisfactory condition found in the lower and mid elevations of the Pole Creek Allotment. The higher elevation loamy range sites would also be grazed two years out of four during the critical growing season. This would be an improvement over current conditions where at least some grazing is occurring every year during the critical growing season. This would allow for the forage vegetation at the upper elevation range sites to improve in vigor, size and production which may allow for reproduction. The sites should also increase in vegetative cover especially during the fall grazing years.

Cattle would graze in Pasture 2 beginning October 1 and ending November 30, which is well after seed ripe and should result in maintaining and improving the acceptable conditions found there.

The development or construction of rangeland projects would have minor short term negative impacts to the vegetation. The impacts would occur as a result of overland travel to the site (bruising and crushing of the vegetation) and the actual construction (destroying the vegetation as a result of digging the plants up when setting headboxes, pipelines, troughs and fence posts).

2. Special Status Plant Species

There is so little information about special status plants in this allotment that an evaluation of impacts can only be discussed in general terms. This alternative changes the season of use in pastures 1A and 1B to early use (May to July) followed by two years of fall use in a four year rotation system. Pastures 1A, 1B and 3 would be grazed two years during the active growth season and deferred for two years. Impacts to upland plant communities from grazing during the active growing season are expected to be offset, to a degree, by two years of fall use.

Pasture 2 would be grazed in October and November each year. At this time the plants are completely dormant and the habitat would probably be dry making trampling impacts negligible, or at least trampling impacts to the living plants would not occur.

All of the proposed range management projects, including fencing, spring developments, and fence removal would be subject to an on-the-ground evaluation. These projects would be modified or eliminated to mitigate any impacts to special status plants, if possible. The spring developments would be fenced to exclude livestock, which would improve riparian habitat in those exclosures. Riparian habitats in general are expected to improve under this alternative with the removal of hot season use.

3. Wildlife/Special Status Animals

Under Alternative 3, the two years of early season grazing in pastures 1A, 1B, and 3 would result in reduced forage and cover availability as well as physical disturbance of special status species and other wildlife breeding populations and habitats, possibly limiting nesting success and production during these years. However, by following spring grazing treatments with two years of back-to-back deferred grazing, vigor, production, ground cover and structure of desirable upland vegetation should gradually improve. This should result in enhanced habitat conditions for most wildlife by increasing nesting and hiding cover and increasing forage, seed and insect production. Riparian habitats are also expected to gradually improve under this system since vegetation in these areas should be able to achieve full re-growth following livestock removal during years of spring grazing while making substantial gains in vigor, production, cover and structure and providing undisturbed habitat for breeding populations of dependant special status species and other wildlife during the two years of fall grazing. However, riparian improvement would only occur if cattle don't concentrate in riparian areas during deferred treatments. Fall use could also possibly result in overuse of preferred upland and riparian browse plants since they are typically more nutritious and palatable than herbaceous vegetation during this time of year. This could result in reduced forage for any wintering deer or elk.

Annual fall grazing and complete lack of growing season use in pasture 2 should result in even more rapid improvement in upland and possibly riparian habitat conditions in this pasture, but would be subject to the same conditions as described for fall use treatments in the other pastures.

This treatment would also avoid any adverse impacts to habitats and populations during the nesting/breeding season.

4. Riparian/Aquatic Resources

Under this alternative, the 20 miles of stream on the Pole Creek Allotment that are currently functional-at risk would improve to proper functioning condition over the long term. Improvement in riparian habitat conditions would be substantially greater than that under Alternative 2 (existing situation), but slower than that under Alternative 4 (stuttered early use and rest). The proposed action would improve stream and riparian habitat conditions by changing livestock grazing from annual grazing during the hot season to alternating two years of spring/early summer grazing and two years of fall grazing (Pastures 1A,1B, and 3), or fall use (Pasture 2).

When streams in Pastures 1A,1B, and 3 are grazed during the spring and early summer, utilization of herbaceous riparian vegetation would be high, and some bank trampling and shearing would occur. However, overall trend would be upward because of reduced use of woody riparian plants during the spring/early summer grazing period, and by substantially reducing livestock use of riparian areas in 2 out of 4 years by grazing these areas in the fall. Over the long-term the density and vigor of late-seral riparian plant species (willows, sedges, and rushes) would improve on functional-at risk stream segments. Additionally, density and diversity of late-seral riparian species would improve on stream segments that are currently in properly functioning condition due to lower livestock use of riparian vegetation resulting from changing the grazing periods to spring/early summer and fall.

Squaw Creek in Pasture 2 is in proper functioning condition and would be expected to continue to function properly with the change to fall grazing use provided short-term objectives for browse use are met.

Aquatic habitat conditions would improve over the long term on the Pole Creek Allotment as channel form improves (narrow and deeper stream channels), fine sediment levels decrease, and stream shading levels increase due the development of dense and vigorous riparian plant communities dominated by riparian shrubs. Redband trout would particularly benefit from aquatic habitat improvement in stream segments in the Middle Fork Owyhee River basin that are currently nonfunctioning or in functional-at risk condition.

5. Water Quality

Water quality would improve over the long term. Rate of improvement would be slower than under Alternatives 1 and 4. With the development of dense and vigorous riparian plant communities dominated by riparian shrubs, channel form would improve (deeper and narrower channels) and riparian shade would increase. Both would result in cooler water temperatures by reducing the amount of solar energy input into streams. Additionally, the development of vigorous riparian plant communities would stabilize streambanks and channels, resulting in

lower levels of fine sediment from eroding, unstable streambanks. Over the long term, streams on the allotment would fully support beneficial uses and comply with State of Idaho water quality standards. Improvements in water quality of headwater streams in the Middle Fork Owyhee and Squaw Creek watersheds on the Pole Creek Allotment would also contribute to improved water quality on downstream segments of these 303(d) listed streams. By decreasing temperature and increasing levels of riparian shade this alternative would comply with Idaho DEQ's North Fork and Middle Fork Owyhee River TMDL.

6. Soils

Overall impacts to the watershed/soil resource (being closely tied to the vegetative community and soil surface stability) would be positive and watershed health would improve. Where the Standards for Rangeland Health are not currently being met, improvement could occur and progress toward meeting these standards anticipated. In portions of the allotment where livestock use is limited these standards are being met and would continue to be met.

Under the Proposed Action a deferred rotation system would be incorporated to aid in the livestock management for this allotment. The grazing system would change such that pasture 1A, 1B, and 3 would be defer rotated with grazing occuring for two years in a row during the key bunchgrass species critical growing season followed by two consecutive years of fall grazing in a four year system. Pasture 2 would be grazed each year in the fall. Manada Flat would not be grazed.

The spring and early summer use in the deferred system pastures, which would occur during the critical phenological growth period of the key plant species, could have a negative effect on plant vigor, reestablishment, nutrient cycles, and soil stability. By allowing two years of deferment after the two years of early use and adhering to utilization limits on these key species, these impacts could be offset and there may be a slight positive result. This analysis is also supported by the observation that past utilization of the key plant species in these pastures has been light to moderate. There would be a slight negative effect in these pastures by turning livestock out early in the spring in terms of soil moisture (soils may be wet earlier and more subject to mechanical impacts from livestock hoof action). There is also more potential for hoof shearing of key species and the "plucking" (pulling out the entire young plant) of Idaho fescue plants. The deferment incorporated into the system for these pastures would aid in reducing or negating these impacts.

Pasture 2 would be grazed every year from 10/1-11/30. There could be a negative effect on the watershed under this system if livestock remove too much of the standing litter and vegetative cover thereby depleting organic matter and removing canopy and litter cover. This could impact hydrologic and nutrient cycles. By incorporating and enforcing specific utilization limits on key

perennial grass species these plants can better meet their phenological growth needs and both the litter and canopy cover component of the system could be improved which would reflect

positively on rangeland health and watershed function.

Manada Flat would not be subject to the impacts associated with livestock grazing discussed in this section.

Mechanical impacts to the soil surface from livestock hoof action would continue in those areas where livestock tend to congregate (water, salt, gates). Many of the erosional features that have been documented in this allotment (pedastalling of bunchgrass is an example) have developed over many tens of years and under older grazing management systems. The proposed system could aid in making progress towards healing these processes. It must be realized that under any improved grazing system, positive changes to the watershed characteristics (making significant progress in terms of watershed health) would take time and is dependent on other attributes besides grazing.

Watershed impairing effects due to western juniper encroachment would continue. When key forage species are allowed to meet their phenological growth needs they can better compete with juniper for moisture and nutrients thereby offsetting some of the negative impacts associated with encroachment.

Water developments would affect the soil resource by concentrating use, which results in herbivore trampling (resulting in soil compaction and/or structural breakdown) and herbivore stripping and mortality of vegetative cover. These impacts would be confined to the immediate area around the development and dissipate radially away from the development. Trailing impacts leading into the development would also negatively affect the watershed. Where these types of developments improve distribution of livestock and prevent negative impacts to riparian corridors by keeping livestock on the uplands areas, there would be an overall benefit to the watershed.

Actions associated with fencing (construction and removal) would have minimal impacts on the soil resource. If livestock tend to bunch up at the fence or trail along fence lines there would be similar impacts as discussed under water developments. Where these range developments aid in the distribution and management of livestock a benefit would occur to the watershed.

7. Cultural Resources

This alternative has some potential to improve range conditions but would not necessarily preserve the integrity of cultural resources. Other impacts are as described under Alternative 2. Additional impacts of the range improvement projects and maintenance of existing spring developments and reservoirs would be addressed on a project-by-project basis for compliance with Section 106 of the National Historic Preservation Act.

8. Visual Resource Management

Alternative 3 would have a positive impact on visual resources over the long term. Anticipated improvements in vegetative cover, both in riparian areas and in the uplands, would enhance scenic quality and result in more primitive and natural landscapes. The proposed range developments would be constructed in Class IV VRM areas where that type of construction is acceptable.

9. Recreation

There would be some positive impact on recreation under Alternative 3. Improved vegetative condition would positively affect scenic quality, which would also positively affect recreationists' experiences. This improvement would be somewhat cyclic, as vegetative conditions observable to recreationists would vary dramatically depending on the time of visitation relative to when the area had been grazed. A reduction in duration of use would reduce livestock impacts and make both riparian areas and upland areas more desirable for recreation and more attractive to recreationists. Improved habitat conditions for wildlife would lead to improved opportunities for wildlife viewing, hunting, fishing, and nature study. Areas where livestock congregate would continue to negatively affect recreationists' experiences, both during and after the grazing season. The new fences would be an impediment to cross-country travel for recreationists on foot and on horseback, which would be partially offset by the removal of other fences.

10. Wilderness Study Areas

Alternative 3 would have a slightly positive impact on wilderness values in the Big Willow Springs, Squaw Creek Canyon, and Middle Fork Owyhee River WSAs. Shortened seasons of use and years of deferment would reduce livestock-related impacts to naturalness.

11. Economic/Social

Under this alternative, the permittee and the BLM would have direct costs for construction and removal of rangeland management projects. Direct costs to the permittee would be approximately $5,000. Direct costs to the BLM would be approximately $14,375.

There could also be some impact to the permittee because livestock would not be permitted to graze in the allotment during certain previously authorized periods. This permittee has interests in other BLM permits including the Bull Basin allotment in the Lower Snake River District and on allotments administered by the Vale District BLM in Oregon. Also, the permittee currently holds a lease for 2470 AUMs with the ODSL. However, because the BLM does not have extensive knowledge of other ranching interests or alternative grazing options available to the permittee or access to his financial and business records, it is impossible to quantify the effect. There could be potential for some of the displaced grazing use to be absorbed into other

operations where the permittee has interest or the permittee could also be forced to find alternative rangeland to graze the livestock, feed or sell them.

This alternative would require that the permittee conduct timely livestock removal at the end of the authorized grazing period(s). This would require that the permittee, or someone he employed, spend more time gathering and moving cattle, and possibly increase operating costs.

Overall, this alternative would result in more economic and social impact to the permittee than Alternatives 2 and 5, but less impact than Alternatives 1 and 4.

In general, other social and economic impacts from this alternative would be similar to those described in the July 1999 EIS for the Owyhee RMP (pages IV-295 to IV-297).

D. Alternative 4 - Stuttered early use and rest (Map 3)

1. Upland Vegetation

Under this alternative approximately 96 percent of the allotment would be grazed two years in a row followed by rest or no grazing for two years in a row. The shallow and very shallow range site communities would be grazed during the critical growing season two years out of four. This would likely maintain the satisfactory condition found in the lower and mid elevations of the Pole Creek Allotment. The higher elevation loamy range sites would also be grazed two years out of four during the critical growing season. This would be an improvement over current conditions where at least some grazing is occurring every year during the critical growing season. This would allow for the forage vegetation at the upper elevation range sites to improve in vigor, size and production which may allow for reproduction. The sites should also increase in vegetative cover especially during the no grazing (rest) years.

Cattle would graze in Pasture 2 beginning October 1 and ending November 30 which is well after seedripe and should result in maintaining and improving the acceptable conditions found there.

The development or construction of rangeland projects would have minor short term negative impacts to the vegetation. The impacts would occur as a result of overland travel to the site (bruising and crushing of the vegetation) and actual construction (destroying the vegetation as a result of digging the plants up when setting headboxes, pipelines, troughs and fence posts). Long term positive impacts would include protection of spring areas within the exclosure.

2. Special Status Plant Species

There is so little information about special status plants in this allotment that an evaluation of impacts can only be discussed in general terms. This alternative would reduce the permitted use by 25 percent, change the season of use in pastures 1A and 1B to earlier season (May to July), and incorporate 2 years of rest into a four year rotation system. Pastures 1A and 1B would be grazed two years during the active growth season and rested for two years. Impacts to upland plant communities from grazing during the active growing season are expected to be offset by the reduction in permitted use and by incorporating rest into the system. Pasture 2 would be grazed in October and November each year. At this time the plants are completely dormant and the habitat would probably be dry making trampling impacts negligible, or at least trampling impacts to the living plants would not occur. All of the proposed range management projects, including fencing, spring developments, and fence removal would be subject to an on-the-ground evaluation. These projects would be modified or eliminated to mitigate any impacts to special status plants, if possible. The spring developments would be fenced to exclude livestock, which would improve riparian habitat in those exclosures. Riparian habitats in general are expected to improve under this alternative with the removal of hot season use.

3. Wildlife/Special Status Animals

Under Alternative 4, the two years of early season grazing in Pastures 1 and 2 would result in reduced forage and cover availability as well as physical disturbance of special status species and other wildlife breeding populations and habitats, possibly limiting nesting success and production during these years. However, over the long term, the 30 percent reduction in stocking rate and two years of back-to-back rest in these pastures should result in gradual improvement of desirable plant species vigor, production, ground cover and structure in the uplands, all of which should enhance habitat for most wildlife by increasing nesting and hiding cover and increasing forage, seed and insect production. Riparian habitats should improve rapidly under this system since vegetation in these areas should be able to achieve full regrowth following livestock removal during years of grazing while making substantial gains in vigor, production, cover and structure and providing undisturbed habitat for breeding populations of dependant special status species and other wildlife during the two rest years.

Two months of late fall use in pasture 2 should allow for improvement in vigor of upland and riparian vegetation since all use would occur when plants are dormant and have been allowed to complete full growth and production. This should result in improving habitat conditions for most dependent wildlife and special status species. It could, however, result in overuse of preferred browse plants since they are typically more nutritious and palatable than herbaceous vegetation during this time of year. This could result in reduced forage for wintering deer or elk.

The construction of 3.0 miles of additional pasture fence would result in some minor, short term impediments to big game movements and disturbance during construction and some minor, long term increases in wildlife mortality from collisions and entanglement but would be off set, to some degree by the removal of 1.0 mile of fencing surrounding the old chaining. The new

fences should, however, facilitate the implementation of proposed grazing system which is expected to result in long term improvement in habitat conditions for most wildlife and special status species.

The development of two springs would result in some minimal loss of water from these systems which could result in adverse impacts to dependent riparian vegetation, wildlife and special status species. However, trough overflow would be directed back into the drainage, which should limit the loss of water from the system. The spring sources and associated riparian habitat would be fenced to exclude livestock and should result in a significant improvement in riparian habitat for most dependant species. There is also likely to be an increase in livestock use within the immediate vicinity of these developments resulting in reduced forage and cover and increased physical disturbance of wildlife populations and habitats in these areas.

4. Riparian/Aquatic Resources

Under Alternative 4, the 20 miles of stream on the Pole Creek Allotment that are currently functional-at risk would improve to proper functioning condition over the medium to long term. Improvement in riparian habitat conditions would be substantially greater than under Alternative 2 (existing situation), and faster than under Alternative 3 (proposed action). The proposed action would improve stream and riparian habitat conditions by changing livestock grazing from annual grazing during the hot season to alternating two years of spring/early summer grazing and two years of rest (Pastures 1A , 1B and 3), or fall use (Pasture 2).

When streams in Pastures 1A ,1B and 3 are grazed during the spring and early summer, utilization of herbaceous riparian vegetation would be high, and some bank trampling and shearing would occur, but overall trend would be strongly upward due to reduced use of woody riparian plants and resting the streams from livestock grazing in 2 out of 4 years. The proposed action would allow the development of dense, vigorous riparian plant communities dominated by late-seral species (such as willows, sedges, and rushes) on the functional-at risk segments. Additionally, density and diversity of late-seral riparian species would improve stream segments currently in properly functioning condition due to lower livestock use of riparian vegetation.

Squaw Creek in Pasture 2 is in proper functioning condition and would be expected to continue to function properly with the change to fall grazing provided short-term objectives for browse use are met.

Aquatic habitat conditions would improve over the long term on the Pole Creek Allotment as channel form improves (narrow and deeper stream channels), fine sediment levels decrease, and stream shading levels increase due the development of dense and vigorous riparian plant communities dominated by riparian shrubs. Redband trout would particularly benefit from improvement of aquatic habitat in stream segments in the Middle Fork Owyhee River basin that are currently in functional-at risk condition.

5. Water Quality

Water quality would improve over the long term and rate of improvement would only be slightly slower than that under Alternative 1. With the development of dense and vigorous riparian plant communities dominated by riparian shrubs, channel form would improve (deeper and narrower channels) and riparian shade would increase. Both would result in cooler water temperatures by reducing the amount of solar energy input into streams. Additionally, the development of vigorous riparian plant communities would stabilize streambanks and channels, resulting in lower levels of fine sediment from eroding, unstable streambanks. Over the long term, Pole Creek Allotment streams could fully support beneficial uses and comply with State of Idaho water quality standards. Headwater quality improvements in the Middle Fork Owyhee and Squaw Creek watersheds would also contribute to improved water quality on downstream segments of these 303(d) listed streams. By decreasing temperature loading and increasing levels of riparian shade this alternative would comply with Idaho DEQ s North Fork and Middle Fork Owyhee River TMDL.

6. Soils

Overall impacts to the watershed/soil resource (closely tied to the vegetative community and soil surface stability) could be positive and watershed health would improve (especially with anticipated progress in the health of riparian systems). Both pastures currently not meeting the Standards for Rangeland Health could show progress towards meeting those standards. In portions of the allotment where livestock use is limited these standards are being met and would continue to be met.

Under Alternative 4 the season of use in all pastures of the Pole Creek Allotment would be changed along with pasture configuration to aid in livestock management. The grazing system would consist of using Pastures 1A and 1B (which now includes Pasture 3) in a rest rotation fashion with grazing to occur from 5/16-7/15 for two consecutive years in a pasture followed by two consecutive years of rest. The spring and early summer use in these pastures, which would occur during the critical phenological growth period of the key plant species, could have a negative effect on plant vigor, reestablishment, nutrient cycles, and soil stability. Allowing two years of rest after the two years of grazing and adhering to utilization limits on key species could offset the impacts and there may be a positive result. This analysis is also supported by the observation that past utilization of these key plant species has been light to moderate. There could be a slight negative effect in these pastures by turning livestock out early in the spring in terms of soil moisture (soils may be wet earlier and more subject to mechanical impacts from livestock hoof action). There is also more of a potential for hoof shearing of key species and the "plucking" (pulling out the entire young plant) of Idaho fescue plants. The rest incorporated into the system for these pastures would aid in reducing or negating these impacts. Pasture 2 would be grazed every year from 10/1-11/30. There could be a negative effect on the watershed under this system if livestock remove too much of the standing litter and vegetative cover, thereby depleting organic matter and removing canopy. This could impact hydrologic and nutrient cycles. By incorporating and enforcing specific utilization limits on key perennial grass species these plants can better meet their phenological growth needs. Both the litter and canopy cover

component of the system could then be improved which would reflect positively on rangeland health and watershed function. Manada Flat would not be subject to the impacts associated with livestock grazing discussed in this section.

Mechanical impacts to the soil surface from livestock hoof action would continue in those areas where livestock tend to congregate (water, salt, gates). Many of the erosional features that have been documented in this allotment (pedastalling of bunchgrass is an example) have developed over many tens of years and under older grazing management systems. The proposed system could aid in making progress towards healing these processes. It must be realized that under any improved grazing system positive changes to the watershed (making significant progress in terms of watershed health) would take time and is dependent on other agents besides grazing.

Watershed impairing effects due to western juniper encroachment would continue. Where the key forage species are allowed to meet their phenological growth needs these plants can better compete with the juniper for moisture and nutrients thereby offsetting some of the negative impacts associated with juniper encroachment.

Water developments would affect the soil resource by concentrating use, which results in herbivore trampling (resulting in soil compaction and/or structural breakdown) and herbivore stripping and mortality of vegetative cover. These impacts would be confined to the immediate area around the development and dissipate radially out from the development. Trailing impacts leading into the development would also negatively affect the watershed. Where these types of developments improve the distribution of livestock and prevent negative impacts to the riparian corridors by keeping livestock on the uplands areas, there would be an overall benefit to the watershed.

Actions associated with fencing (construction and removal) would have minimal short term impacts on the soil resource. If livestock tends to bunch up at the fence or trail along fence lines there would be similar impacts as discussed under water developments. Where these range developments aid in the distribution and management of livestock a benefit would occur to the watershed.

7. Cultural Resources

This alternative has some potential to improve range conditions but would not necessarily preserve the integrity of cultural resources. Other impacts are as described under Alternative 2. Additional impacts of the range improvement projects and maintenance of existing spring developments and reservoirs would be addressed on a project-by-project basis for compliance with Section 106 of the National Historic Preservation Act.

8. Visual Resource Management

This alternative would have a positive impact on visual resources over the long term. Anticipated improvements in vegetative cover, both in riparian areas and in the uplands, would enhance scenic quality and result in more primitive and natural landscapes. The proposed range developments would be constructed in Class IV VRM areas where that type of construction is acceptable.

9. Recreation

There would be some positive impacts on recreation under Alternative 4. Improvements in scenic quality due to improved vegetative condition would also positively affect recreationists' experiences. This improvement would be somewhat cyclic, as vegetative conditions observable to recreationists would vary dramatically depending on the time of visitation relative to when the area had been grazed. A reduction in livestock stocking levels and duration of use would reduce livestock impacts and make both riparian and uplands areas desirable for recreation and more attractive to recreationists. Improved habitat conditions for wildlife would lead to improved opportunities for wildlife viewing, hunting, fishing, and nature study. Areas where livestock congregate would continue to negatively affect recreationists' experiences, both during and after the grazing season. The new fences would be an impediment to cross-country travel for recreationists on foot and horseback, which would be partially offset by the removal of other fences.

10. Wilderness Study Areas

This alternative would have a slightly positive impact on wilderness values in the Big Willow Springs, Squaw Creek Canyon, and Middle Fork Owyhee River WSAs. Shortened seasons of use, reduced stocking levels, and years of rest from grazing would reduce livestock-related impacts to naturalness. Removal of the Middle Fork gap fencing within the Middle Fork Owyhee River WSA would increase naturalness in that area.

11. Economic/Social

Under this alternative, the permittee and the BLM would have direct costs for construction and removal of rangeland management projects. Direct costs to the permittee would be $7,500. Direct costs to the BLM would be $15,375.

There could also be some impact to the permittee because livestock would not be permitted to graze in the allotment during certain previously authorized periods. This permittee does have interests in other BLM permits including the Bull Basin allotment in the Lower Snake River District and on allotments administered by the Vale District BLM in Oregon. Also, the permittee currently holds a lease for 2470 AUMs with the Oregon Division of State Lands. However, because the BLM does not have extensive knowledge of other ranching interests or

alternative grazing options available to the permittee or access to his financial and business records, it is impossible to quantify the effect. There could be potential for some of the displaced grazing use to be absorbed into other operations where the permittee has interest or the permittee could also be forced to find alternative rangeland to graze the livestock, feed or sell them.

This alternative would require the permittee to conduct timely livestock removal at the end of the authorized grazing period(s). This would require that the permittee, or someone he employed, spend more time gathering and moving cattle, and possibly increase operating costs.

Overall, this alternative would result in more economic and social impact to the permittee than Alternative 2 and 4, but less impact than Alternative 1.

In general, other social and economic impacts from this alternative would be similar to those described in the July 1999 EIS for the Owyhee RMP (pages IV-295 to IV-297).

E. Alternative 5 - Maximize Projects (Map 4)

1. Upland Vegetation

The upland vegetation would respond to the proposed grazing similarly to that analyzed in Alternative 2. The numerous water developments may improve livestock distribution in some areas and worsen it in others.

The construction of rangeland projects would result in greater short term negative impact to the vegetation versus Alternative 3 due to the greater number of proposed projects.

2. Special Status Plants

Alternative 5 is the same as the current management, Alternative 2, with the exception of the large number of range improvement projects, primarily water developments (12 new spring developments and 3 new reservoirs). This alternative would more than double the number of water developments in the allotment. All of these projects would be subject to pre-construction surveys for special status plants and any impacts to special status plants would be mitigated, if possible. Because there are more range improvement projects, the impact to upland communities under this alternative would be greater than under Alternative 2. Cattle would congregate around these water developments as well as in the riparian areas since the season of use would still be during the hot season. Riparian habitats are not expected to improve under this alternative. Impacts that are occurring to calico-flower habitat, if any, would continue under this alternative as under Alternative 2.

3. Wildlife/Special Status Animals

The impacts of livestock grazing management to special status animals and other wildlife under Alternative 5 would be very similar to those described under Alternative 2 except that use patterns would likely change with the development of the fourteen new water developments. While there may be some small reduction in livestock use of stream riparian habitat, the effect of additional upland water developments is expected to be minor. These habitats are expected to continue to receive unacceptable levels of use as a result of annual hot season grazing. The impacts associated with development of 12 new spring developments would be the same as those described under Alternative 3 except that they would occur at ten additional locations. While habitat for riparian dependent species would likely improve within the fenced portion of the spring developments, some loss of water from these systems and increased livestock grazing and trampling in the immediate vicinity of the springs would result in reduced forage and cover for wildlife and increased physical disturbance of habitats and populations. Similar adverse impacts would be associated with the two new reservoirs although there would be more habitat loss and disturbance associated with the actual construction. These reservoirs would, however, result in some additional wetland habitat for amphibians, waterfowl, shorebirds and possibly others as well as additional drinking water for deer, elk and other wildlife.

4. Riparian/Aquatic Resources

Impacts to riparian/aquatic habitats of this grazing management alternative would be similar to that of Alternative 2. Development of 12 springs may distribute some livestock away from streams and riparian areas on the allotment, but duration and intensity of livestock use would still be too great for streams to improve in condition with annual hot season grazing from July 1 to September 30. Approximately 20 miles of stream would remain in functional-at risk condition under this alternative. Stream segments currently in proper functioning condition due to limited livestock access would remain so under this alternative, but diversity and density of late seral-riparian species would be less than under Alternative 1, and somewhat less than proposed action.

5. Water Quality

Under Alternative 5 impacts to water quality would be similar to that of Alternative 2. Spring development and reservoirs would result in only limited reductions in livestock use of streams and riparian areas. Continued annual hot season grazing on accessible portions of Squaw and Pole Creeks and the Middle Fork Owyhee River and their tributaries would not allow the development of vigorous, late-seral dominated riparian plant communities. Riparian habitats dominated by late-seral species stabilize streambanks and channels, allow formation of deep and narrow stream channels, and reduce fine sediment levels. Additionally, the development of late-seral plant communities dominated by willows and other riparian shrubs, would prevent solar heating of streams. Under Alternative 5, these streams would not fully support the salmonid spawning and rearing, and cold water beneficial uses, and would not comply with Idaho DEQ's North Fork and Middle Fork Owyhee River TMDL.

6. Soils

Overall impacts to the watershed/soil resource would continue and watershed health would change little from the existing conditions. The allotment would not make significant progress towards meeting the Standards for Rangeland Health. In portions of this allotment, where livestock use is limited these standards are being better met.

Under Alternative 5 the current grazing system would be maintained with a number of livestock related water developments implemented. Under the existing system the on-going erosional processes and watershed concerns would continue. The water developments could provide relief for impacts that are occurring in riparian areas if fencing excludes livestock use but may not aid in relieving the upland concerns. The phenological needs of the key perennial species in the high elevation areas would not be met. This would not allow for sufficient regrowth and its associated soil protecting vegetative canopy and litter cover. Soil productivity could be reduced under a system that does not allow for proper nutrient cycling. Mechanical impacts to the soil surface from livestock hoof action would continue where livestock tend to congregate. Many of the erosional features that have been documented in these allotments (pedastalling is an example) have developed over many tens of years and under older grazing management systems. This proposed systems does not appear to be able to make progress towards healing these processes.

Watershed impairing effects due to western juniper encroachment would continue. Where key forage species are allowed to meet their phenological growth needs plants can better compete with the juniper for moisture and nutrients thereby offsetting some of the negative impacts associated with encroachment.

Water developments would affect the soil resource by concentrating use, which results in herbivore trampling (resulting in soil compaction and/or structural breakdown) and herbivore stripping and mortality of vegetative cover. These impacts would be confined to the immediate area around the development and dissipate radially out from the development. Trailing impacts leading into the development would also negatively affect the watershed. Where these types of developments improve the distribution of livestock and prevent negative impacts to the riparian corridors by keeping livestock on the uplands areas there would be an overall benefit to the watershed.

Actions associated with fencing construction and removal would have minimal impacts on the soil resource. If livestock tend to bunch up at the fence or trail along fence lines there would be similar impacts as discussed under water developments. Where these range developments aid in the distribution and management of livestock a benefit would occur to the watershed.

7. Cultural Resources

Alternative 5 has some potential to improve range conditions but would not necessarily preserve the integrity of cultural resources. Other impacts are as described under Alternative 2. Additional impacts of the range improvement projects including maintenance of spring developments and reservoirs would be addressed on a project-by-project basis for compliance with Section 106 of the National Historic Preservation Act.

8. Visual Resource Management

Under this alternative, impacts to scenic quality currently occurring in areas of heavy livestock utilization would continue. Some of these impacts would also shift to additional areas near new reservoirs and spring developments. Nine of the twelve spring developments and all three reservoirs proposed under this alternative would be constructed in areas classified as VRM Class II-IMP areas within WSAs. Construction of new rangeland facilities is not permitted in these areas, according to the Owyhee Resource Management Plan (1999). Three of the proposed spring developments would be constructed in Class IV VRM areas where range facility construction may be permitted.

9. Recreation

With Alternative 5, impacts to recreation occurring due to livestock grazing would continue, and additional impacts would occur in upland areas surrounding the new reservoirs. The new fences would be an impediment to cross-country travel for recreationists on foot and horseback. The large number and type of new livestock developments would negatively affect the primitive setting and natural environment. Recreational use levels would likely continue to incrementally increase, which is the trend throughout the area.

10. Wilderness Study Areas

Under this alternative, the wilderness value of naturalness would continue to be negatively affected in portions of the three WSAs which receive heavy livestock utilization. Construction of two reservoirs within the Middle Fork Owyhee River WSA and one reservoir within the Big Willow Springs WSA would cause new surface disturbance, would negatively affect the primary values of naturalness and primitive and unconfined recreational values within the WSAs, and would be noticeable within the WSAs. The new reservoir construction would not be in conformance with BLM policy for administration of WSAs. Construction of nine spring developments and associated exclosure fences within the three WSAs would also cause new surface disturbance, and would reduce naturalness in the WSAs.

11. Economic/Social

Under this alternative, the permittee and the BLM would have direct costs for construction and removal of rangeland management projects. Direct costs to the permittee would be $7,500. Direct costs to the BLM would be $154,750.

Other impacts would be similar to those discussed under Alternative 2.

V. MITIGATION

A. Site specific surveys would be conducted for special status plant species prior to implementation of all the projects. In the event of discovery of resource values that might be impacted by the project, the project would be relocated or modified to such an extent that the impacts would be avoided or mitigated to an acceptable level.

B. Site specific surveys would be conducted for rare animal species prior to implementation of all the projects. In the event of discovery of resource values that might be impacted by the project, the project would be relocated or modified to such an extent that the impacts would be avoided or mitigated to an acceptable level.

C. Site specific surveys would be conducted for cultural values prior to implementation of all the projects. In the event of discovery of significant cultural resource values that might be impacted by the project, the project would be relocated or modified to such an extent that the impacts would be avoided or mitigated to an acceptable level, or other mitigation measures proposed and implemented.

D. All soil surfaces exposed due to construction of rangeland projects (such as spring construction) would be seeded with a mixture of appropriate native species.

E. The development of the two springs would be designed to capture no more than 50 percent of the flow. To ensure the long-term productivity and ecological integrity of these Springs, the source water area would be protected from livestock grazing.

F. No motorized equipment would be used to remove the fences within Squaw Creek WSA.

VI. PUBLIC PARTICIPATION

Affected permittees, State agencies having lands or responsible for managing resources within the area, and interested publics were consulted during the allotment assessment and National Environmental Policy Act (NEPA) review process. A letter dated May 12, 2000 was mailed informing them the assessment process was beginning and comments, data, photographs, etc. they possess and feel would help or improve the assessments were due into the BLM office on July 15, 2000.
In June, 2000, Mr. Mendieta was informed rangeland field assessments would be conducted. On

June 29, 2000, he visited with BLM staff when the upland qualitative assessments and nested frequency trend data was being gathered on the Pole Creek Allotment.

The draft allotment assessment was completed and mailed April 19, 2001. A letter sent with the draft assessment requested comments on the draft assessment by April 30, 2001.

The final assessment and determination documents were mailed July 23, 2001. A letter sent with these documents requested comments for BLM's consideration on proposed actions necessary to rectify the issues raised in the determination documents. Comments were due August 6, 2001. Comments were received from Owyhee County, Committee for Idaho's High Desert (CIHD), Circle Bar Ranches (Mr. Mendieta) and Western Watersheds Project (WWP). All substantive comments were considered in the preparation of the EA document.

Meetings were held with the livestock permittee (Mr. Mendieta) on December 21, 2001 and on January 14, 2002, changes to the present management on the Pole Creek Allotment that would make significant progress toward achieving the standards for rangeland health and conform with the guidelines for livestock grazing management.

On March 4, 2002, the BLM received written comments from Budd-Falen Law Offices, P.C. on behalf of Mr. Mendieta. The written comments were used to formulate Alternative 4 in this EA #ID-096-02011.

On April 3, 2002, a meeting was held in Juntura, Oregon to coordinate with the ODSL. The Pole Creek Allotment lies adjacent to lands administered by the ODSL. The discussion centered around issues pertaining to both public and State lands and the potential impacts which may surface due to livestock adjustments on the Pole Creek Allotment. An additional meeting was held on April 9, 2002, in Jordan Valley, Oregon to discuss the same issues mentioned above. Those present included representatives from the BLM, the ODSL and the permittee.

On November 12, 2002, a meeting was held in Jordan Valley, Oregon to discuss a draft final decision or other options on the Pole Creek Allotment that could meet RMP objectives, standards for Rangeland Health and Guidelines for Grazing Administration. Representatives from ODSL, the BLM and Mr. Mendieta were present to discuss the integration of Pole Creek with Mr. Mendieta's lease with ODSL.

On March 14, 2003, a meeting was held in Marsing, Idaho to discuss a draft final decision or other management options on the Pole Creek Allotment that could meet RMP objectives, standards for Rangeland Health and Guidelines for Grazing Administration. Representatives from the BLM, Ranges West and Mr. Mendieta were present.

On March 26, 2003 a meeting was held in Burns, Oregon to further discuss livestock management in the Pole Creek Allotment. Representatives from the BLM, Ranges West, ODSL and Mr. Mendieta were present.

APPENDIX 1

WATER QUALITY RESTORATION PLAN

Water Quality Restoration Plan

Portion of the North Fork and Middle Fork Owyhee River Subbasin (HUC #17050107)

A. Overview

Streams on the Pole Creek Allotment include all or portions of: the Middle Fork Owyhee River and its tributaries (Scott Springs Creek, Granite Springs Creek, Two Springs Creek, and Little Willow Spring Creek), Pole Creek, and Squaw Creek and its tributaries (Scott Creek, Lunch Creek, Peach Creek, Helen Creek, Dutcher Creek, and Dukes Hole Creek).

The Middle Fork Owyhee River and Pole Creek drain the western slope of Juniper Mountain in the Owyhee Mountain range and flow generally west from Idaho into Oregon. Squaw Creek also drains the west slopes of Juniper Mountain and is a tributary to the North Fork Owyhee River. Streams in the Pole Creek grazing allotment, are used primarily for livestock grazing and fish and wildlife habitat.

In 1998, two water bodies in the Pole Creek Allotment (both in the Middle Owyhee HUC# 17050107) were classified by the Environmental Protection Agency (EPA) under 303(d) of the Clean Water Act as water quality limited for the following reasons:

HUC #17050107

Middle Fork Owyhee River - Excessive sediment, high temperature, flow alteration
Squaw Creek - Excessive sediment, high temperature, flow alteration

Monitoring in 1999 by Idaho Department of Environmental Quality (DEQ) showed that existing uses of the Middle Fork Owyhee River and the North Fork Owyhee River and its tributaries include: cold water biota, salmonid spawning and rearing (of redband trout), secondary contact recreation, and agricultural water supply. Designated beneficial uses of the Middle Fork Owyhee River also include primary contact recreation, domestic water supply, and special resource waters (IDAPA 16.01.02.140).

All water bodies are required to meet Idaho water quality standards for designated beneficial uses within the State of Idaho. Section 401 of the Clean Water Act states that in the case of interstate waters where state criteria differ, the more restrictive standard must be met at the border. The State of Oregon included the Middle Fork Owyhee River on their 1998 303(d) list for high stream temperature.

Temperature data from streams within the North and Middle Fork Owyhee Hydrologic Unit (HUC) show that streams exceed the current Idaho and Oregon water quality standards for cold water biota, salmonid rearing and salmonid spawning during the designated spawning period. For that reason IDEQ (1999) prepared the “North and Middle Fork Owyhee Subbasin Assessment and Total Maximum Daily Load (TMDL)” document. Data collected and reviewed during this process did not support the excessive sediment classification, however there can be

no increases to the current sediment load that would impair existing uses. The TMDL also did not indicate an excess of bacteria in the system, therefore no bacteria load reduction was proposed. EPA does not require flow alteration to be addressed as a TMDL pollutant therefore flow alteration is not addressed.

All pollutants listed in the 1998 303(d) list are nonpoint sources originating on public, state or private lands within fifth order hydrologic units (HUC 17050107.06 &.08) which in part include the North and Middle Fork Owyhee Rivers and their tributaries in southwest Idaho (see Hydrologic Unit Code Map).

The above listed pollutants, with the exception of flow modification, are the result of (streambank) damage and loss of (streambank) shade due to livestock grazing. Road crossings are a minor source of sediment. (See "North and Middle Fork Owyhee Subbasin Assessment and Total Maximum Daily Load.")

B. Recovery goals and objectives:

The recovery goal is to comply with the Clean Water Act and Idaho Water Quality Standards for temperature, sediment and bacteria on streams crossing public lands in the Pole Creek Allotment.

Objectives include: improve herbaceous and woody species diversity, composition, density, vigor, cover, structure and root-mass; reduce streambank damage; reduce bacteria contamination of the streams.

The vegetation community required to meet the standard for temperature is expected to be:

- Woody species density and canopy cover providing 80 percent or more stream shading.
- A preponderance of late seral stage hydric herbaceous species such as Nebraska sedge and beaked sedge.

C. Restoration Plan

Best Management Practices (IDEQ-ISCC 1993) proposed to address the pollutant sources are as follows:

Pole Creek Allotment:

- Pastures with streams and riparian habitats would either be grazed in spring/early summer alternated with fall grazing, or grazed during the fall (Clary and Webster 1989, Myers 1989).

- Pastures 1A and 1B would be grazed by 500 cattle from May 16 to July 15 in two years out of four, and grazed in fall the other two years. Pasture 2 would be grazed in fall.

- Utilization of bluebunch wheatgrass, or needlegrass, bottlebrush squirreltail, Idaho fescue or mountain brome would not exceed 50 percent of current years growth at key areas in pastures 1-4 as determined by the Quantitative Assessment Landscape Appearance Method (formerly known as the Key Forage Plant Method).

- At least a 4-inch median stubble height would be attained for key hydric herbaceous species such as Nebraska sedge and beaked sedge at the end of the grazing period in the riparian areas along Middle Fork Owyhee River, Scott Springs Creek, Granite Springs Creek, Little Willow Springs Creek, Pole Creek, Squaw Creek, and Peach Creek in Pastures 1A, 1B, and 2, and 6-inch median stubble height would be retained on these streams at the end of the growing season (Clary and Webster 1989, Cowley 1992).

- Utilization of key riparian browse vegetation would be measured in terms of incidence of use (Cowley 1992). The incidence of use on such shrubs as willow, alder and dogwood would not exceed 25 percent on those plants generally less than 3 feet in height in any given year on the above listed streams in Pastures 1A, 1B, and 2.

- Streambank damage attributable to livestock grazing would not exceed 10 percent on any stream segment in Pastures 1A, 1B, and 2.

- Salt and supplement will not be placed within one quarter mile of riparian areas, springs, streams, meadows, aspen stands, playas, or water developments.

- Riparian areas associated with two springs located in the northern portion of Pasture 1A would be excluded from livestock grazing. Water would be piped to troughs for livestock use and the overflow returned to the riparian areas that are excluded from grazing.

- The fence and topographic barriers (Pole Creek canyon) between Pastures 1A and 1B would be evaluated to ensure they prevent livestock movement between the pastures.

The above described component practices are in compliance with the Natural Resources Conservation Service, Conservation Practice Standards for Prescribed Grazing, Code 528A.

D. Margin of Safety

How and to what extent the practice or group of practices is likely to reduce the pollutants and result in compliance with the Water Quality Standards:

Grazing Pastures 1A and 1B in fall in two out of four years would increase the density, cover, and vigor of riparian shrubs on Pole and Squaw Creeks, and the Middle Fork Owyhee River and its tributaries in these pastures over the long term, provided short-term objectives for riparian browse use are regularly met. In years that streams are grazed in spring and early summer, livestock use of herbaceous riparian vegetation would likely be high and some bank alteration would occur, but overall trend in riparian shrub cover and shade and streambank stability would be upward as a result of limiting the amount of hot season grazing (Myers 1989).

Grazing Pasture 2 in the fall would result in Squaw Creek continuing to remain in proper functioning condition provided short-term objectives for riparian browse use are regularly met. The density, vigor, and cover or late-seral vegetation (willows, sedges, and rushes) would remain high as a result of the combination of fall grazing use and limiting livestock use of riparian shrubs (Clary and Webster 1992).

Streams grazed during early summer have some potential for regrowth of willows and herbaceous riparian vegetation. Some regrowth coupled with the retention of at least a 4-inch median stubble height on herbaceous riparian species, and 75 percent of the current years growth of key shrubs at the end of the early summer grazing period, would insure improved herbaceous and woody riparian vegetation composition, vigor, cover, structure, density and root mass (Clary and Webster 1989). Improved vegetative conditions would result in improved buffering of erosive forces of high flows and increased filtering of sediment allowing for bank stabilization and aggradation, and increased amounts of shade. Streambank stability would improve, water infiltration and bank storage would increase, and water quality, and fishery habitat would improve over the long term.

The narrowing and deepening of the streams associated with bank stabilization and aggradation along with improved stream cover (shade) would reduce water temperature thereby complying with or approaching compliance with the 1999 “North and Middle Fork Owyhee Subbasin Assessment and Total Maximum Daily Load” document (IDEQ 1999) and Standard 7 (Water Quality) for Rangeland Health.

E. Implementation Plan

The grazing system is targeted to be implemented in the year 2003. The target date for construction of two spring developments is the year 2004. Fence construction and maintenance are also targeted for 2004.

Greenline transects and permanent photo trend sites (Cowley 1992, Winward 2000) will be established on Middle Fork Owyhee River, Scott Springs Creek, Granite Springs Creek, Little Willow Springs Creek, Pole Creek, Squaw Creek, and Peach Creek beginning in the year 2004 to monitor progress towards meeting recovery goals and objectives. Permanent photo trend sites have already been established on the Middle Fork Owyhee River.

F. Estimated Recovery Time

Responses to the management changes would be observed in as little as 5 years on some stream segments. Full recovery would be expected in 20 to 25 years on most streams that are functional-at risk. Those streams that are non-functioning would be expected to take 30 years or more for full recovery.

Time frames for stream recovery in this area are based on observations of recovery times in nearby exclosures and allotments with similar grazing management changes by Riparian and Fisheries Specialists with the Lower Snake River District BLM.

G. Cumulative impacts of past, present, and future management

It is expected that all streams in the Pole Creek Allotment would recover from past and present management under the proposed grazing management system. The Pole Creek Allotment comprises 33 percent of the Middle Fork Owyhee River hydrologic unit (HUC# 1705010708), and 90 percent of the Pole Creek hydrological unit (#1705010707). The portion of the allotment that is within the Squaw Creek watershed comprises 7 percent of the North Fork Owyhee River hydrological unit (#1705010706).

The proposed improved management on the Pole Creek Allotment would have the greatest effect on streams located entirely within the allotment, however it would also have positive impacts on water quality of downstream segments of streams associated with the allotment.

The headwaters of many streams are located within this allotment. The establishment of deep-rooted species such as sedge, rush and willow would help these stream headwaters to deepen and narrow and also increase stream shading, which would provide cooler water with less sediment and bacteria to downstream reaches. This, in conjunction with the development of upstream seed sources, would help the lower reaches to recover more rapidly when new grazing systems are implemented there.

H. Monitoring Plan

The greenline transect monitoring method, as described in Idaho DEQ's "Water Quality Monitoring Protocols - Report No. 8" (Cowley1992) and in Winward (2000), will be the primary monitoring tool. No greenline transects have been established in the Pole Creek Allotment to date. Greenline transects and/or photo trend points will be established on Middle Fork Owyhee

River, Scott Springs Creek, Granite Springs Creek, Little Willow Springs Creek, Pole Creek, Squaw Creek, and Peach Creek beginning in the year 2004. Photo trend points have already been established on the Middle Fork Owyhee River.

Livestock utilization of herbaceous and woody riparian species will be monitored periodically as discussed in section C (U.S. Bureau of Land Management 1996, 1999).

Stream temperature will be monitored at 5 year intervals, or as deemed necessary to gather background data and to determine compliance with Idaho Water Quality Standards.

Functioning Condition assessments of streams on the Pole Creek Allotment will be conducted at 10 year intervals or when a change in functioning condition is apparent, whichever comes sooner.

All monitoring is subject to future funding and available personnel.

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